TECHNOLOGY DEPT.

NEW EQUIPMENT DIGEST

A Penton Publication

August, 1954

Volume 19—Number 8

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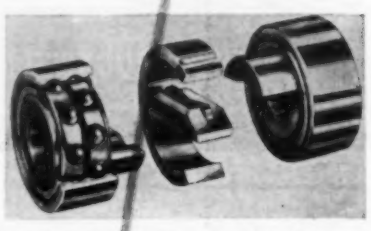
CHECK AND PASS ALONG

✓	NAME	See No.

Use Inquiry Slips—Pages 4 and 100

EQUIPMENT • MATERIALS • PROCESSES • DESIGNS • APPLICATIONS • LITERATURE

DRIVE COUPLING
prevents reverse torque action



No-Bak drive coupling transmits torque in both clockwise and counterclockwise directions, but positively prevents reverse torque action. Used in automobile steering, it would permit the operator to steer as usual, while preventing forces exerted by the front wheels from kicking back to the steering wheel. Device can be used to lock a driven mechanism in any position. Units have torque ratings ranging from 50 to 26,000 lb-in. They have prelubricated ball bearings and require little or no maintenance. They will not slip and can be operated at speeds up to 2000 rpm in the smaller sizes. Made by **Ahlberg Bearing Co.**, 3011 W. 47th St., Chicago 32, Ill.

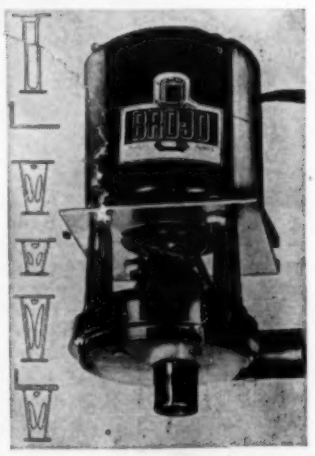
▲ For more details circle **NED-1 H4** on enclosed inquiry slip ▲

ORGANIC WELDING MATERIAL
bonds metal to glass or metals

Moderate heats and little or no pressure are used with Tygoweld organic welding material. It is suitable for making metal-to-glass, metal-to-porcelain and metal - to - metal bonds and is available in rod, powder or paste form, with special color and filleting characteristics to order. Welds will withstand tensile strength tests of more than 4000 psi applied to standard lap shear specimens with only ½-in. overlap. Material is also resistant to corrosion from oils, fats, acids and other chemicals. Aluminum, copper, stainless steel, ceramics, Fiberglas, Nylon, paper and concrete are among the materials which can be successfully joined to themselves or each other. Made by **U. S. Stoneware Co.**, P. O. Box 350-B, Akron, O.

▲ For more details circle **NED-2 H4** on enclosed inquiry slip ▲

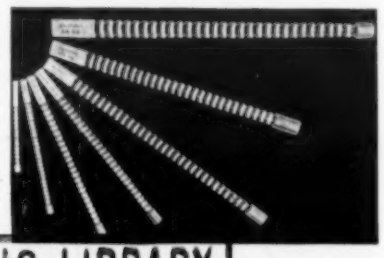
PLASTIC PUMP
centrifugal circulating type



Six different standard mounting brackets are available for the plastic Pro-Jo centrifugal circulating pump. It is molded from phenolic thermosetting plastic that resists chemical action and has low water absorption. Horizontal or vertical mounting and standard motors ranging from 1/80 to 1/10-hp adapt it to a wide range of applications. Hard gloss finish on impeller and housing minimizes water friction and prevents build-up of hard water alkalines on the surfaces. Made by **Broadbent-Johnston, Inc.**, Dept. G, 8845 E. Compton Blvd., Compton 2, Calif.

▲ For more details circle **NED-3 H4** on enclosed inquiry slip ▲

SQUARE BROACHES
for hand operated and arbor presses



Starting with a round pilot, Minute Man square broaches will finish a square hole in a drilled, reamed or cast bore in one pass in less than 1 minute. The push type, high speed steel units are available from stock in eight standard sizes from 3/16 to ¾-in. square. They are usable in hand operated arbor press or hydraulic press. Made by du Mont Corp., 38 Beacon St., Greenfield, Mass.

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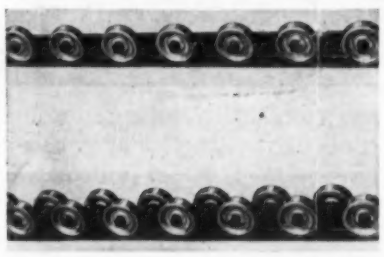
▲ For more details circle **NED-4 H4** on enclosed inquiry slip ▲

WHEEL CONVEYOR LINES
furnished in 10-ft lengths



Suitable for either permanent installation in assembly lines or for moving to the job at shipping and receiving platforms, wheel conveyors are available in both single and double line types as illustrated. Conveyors are furnished in 10-ft lengths and have 2-in. diameter x ⅝-in. steel ball bearing wheels bolted either inside or outside angles. Wheels can be on 1½, 2, 3, 4 or 6-in. centers. Made by **Harry J. Ferguson Co.**, 115 West Ave., Jenkintown, Pa.

▲ For more details circle **NED-5 H4** on enclosed inquiry slip ▲

FLOOR HARDENER
gives wear resistance to concrete

Nonabsorbent, nondusting and nonslip qualities are imparted to concrete flooring with type SH Cortland emery aggregate. Product is 100 per cent natural emery, rich in aluminum oxide for hardness and iron oxide for toughness and nonbrittleness. Packaged in 100-lb bags, aggregate is properly shaped, sized and graded to produce an anchored mat of emery on the floor. It is dry mixed with cement in ratio of four bags of surface hardener to one bag of cement. Mixture is evenly applied to fresh concrete just as concrete reaches initial set. It is then troweled into surface for secure anchorage. Formulated by **Walter Maguire Co.**, 60-N E. 42nd St., New York 17, N. Y.

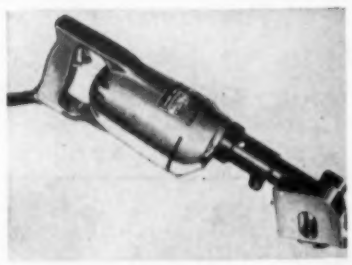
▲ For more details circle **NED-6 H4** on enclosed inquiry slip ▲

WEATHERPROOF WIRING OUTLET
duplex unit is easy to install

Duplex electric outlet is available complete with box. Designated No. 4530, it is of weatherproof design for surface mounting. Box, plate and caps are aluminum. Provision is made for third wire ground if desired. Cover and plate gaskets and rubber grommet seal outlet. It is UL-approved and easy to mount. Made by **Pass & Seymour, Inc.**, 50 Boyd Ave., Syracuse 9, N. Y.

▲ For more details circle **NED-7 H4** on enclosed inquiry slip ▲

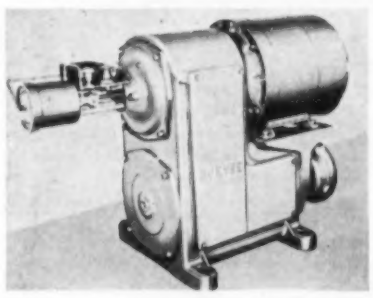
PANEL CUTTING SAW
⅜-in. deep cut has smooth edge



Panel Master heavy duty panel cutting saw will cut and trim sheets and panels and thin sections of metal or soft, rigid materials. The 2-in. diameter saw blade provides a ⅜-in. depth of cut and leaves a smooth milled edge. Saw has a heavy duty 110-v ac-dc, 5/16-in. capacity electric drill motor, with power sufficient to cut 12-gage mild steel, 3/16-in. aluminum and Fiberglas, Masonite, plywood, plastic and plastic laminates up to its full capacity. Ball bearing-equipped unit has lead guide and adjustable depth control. Made by **Kett Tool Co.**, Dept. NE, 5 E. Third St., Cincinnati 2, O.

▲ For more details circle **NED-8 H4** on enclosed inquiry slip ▲

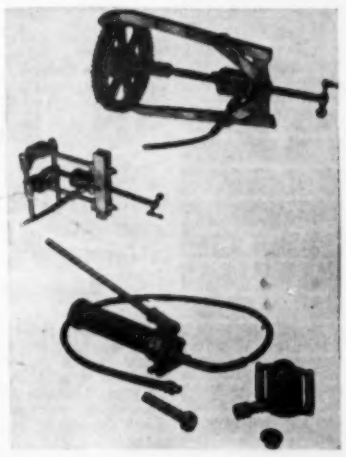
VARIABLE-SPEED DRIVE CONTROL
continuously corrects running speed



Designed for Reeves Vari-Speed Motodrives, Auto-Pneumatic linear speed control continuously corrects output speeds to compensate for changes in temperature, liquid level, pressure, flow, tension and other process variables. Control is operated by a 3 to 15 psi signal and consists of valve positioner and pneumatic piston connected to the Motodrove speed shifting mechanism. Minute changes in instrument air pressure are transmitted to positioner and result in a definite increment of rpm change at drive output shaft. Device is available for all sizes of Motodrive and can be equipped with splashproof, dustproof or other protective features. Made by **Reeves Pulley Co.**, 1225 Seventh St., Columbus, Ind.

▲ For more details circle **NED-9 H4** on enclosed inquiry slip ▲

HYDRAULIC POWER UNIT
for pulling wheels, gears, bearings



Small hand-operated pump supplies ample hydraulic pressure to Hydragrip portable single ram power unit for pulling or pushing gears, wheels, bearings, parts or cylinder sleeves. Few strokes of the pump develop thrusts up to 35,000 lb. Ram is placed concentrically in cylinder to assure alignment of thrust along the center line of puller's forcing screw. Unit has manual pressure relief valve, independent safety valve and high pressure connecting hose with quick-action couplings. Made by **Armstrong-Bray & Co.**, 5388 Northwest Highway, Chicago 30, Ill.

▲ For more details circle **NED-10 H4** on enclosed inquiry slip ▲

NEW! VALVAIR SPEED KING SOLENOID PILOT OPERATED CONTROL VALVES

The New Valvair Speed King line is complete — 3-way, 4-way, 4-way-5-port (2-pressure), foot-mounted or sub-base manifold mounted; pipe sizes — ¼", ⅜", ½", ¾", 1". A precedent-breaker in size, weight, speed and endurance. Get all the facts!

VALVAIR CORPORATION Affiliate: Sinclair-Collins Valve Company 947 BEARDSLEY AVE., AKRON 11, O.
REPRESENTATIVES IN PRINCIPAL CITIES

Rely Upon Valvair DIVERSATILITY

ASK FOR BULLETIN "N-8".

▲ For more details circle NED-11 H4 on enclosed inquiry slip ▲

NOW!

YOU CAN SAVE TIME, LOWER COSTS . . . WITH . . .

SOUTHERN STOVE BOLTS

- Threads Smooth
- Heads Strong
- Dimensions Exact
- Quality Uniform

Gain and hold competitive advantage by smooth operation on the assembly line. Southern Stove Bolts work with you to reduce rejects and speed production.

Slotted Steel Round and Flat Carefully inspected—popular sizes shipped from stock.

600,000,000 Wood Screws

That special wood screw you want may be standard in Southern's tremendous stock, ready for prompt shipment.

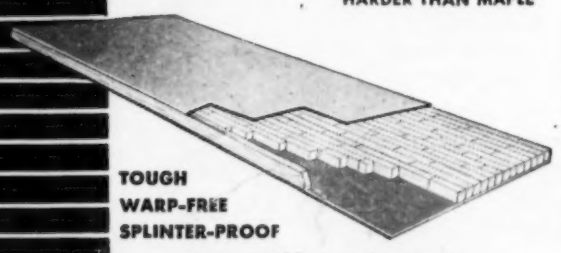
Write us your requirements. Samples and Wood Screw catalogue free upon request. Box 1360-Q

SOUTHERN SCREW COMPANY
Statesville, North Carolina
Wood Screws • Stove Bolts
Factory Warehouses: New York, N. Y. • Chicago, Ill. Los Angeles, Calif. • Dallas, Texas

▲ For more details circle NED-12 H4 on enclosed inquiry slip ▲

NEW WORKBENCH TOP ... Resinwood

Shop Top 30% "HARDER THAN MAPLE"



TOUGH
WARP-FREE
SPLINTER-PROOF

For All Industries

ShopTop quality is superior to maple — with up to 50% greater economy. Select kiln-dried cores, bonded under pressure and heat, provide a built-in impact cushion to give longer life. Smooth Resinwood facings resist acid, alkali, oil, and grease. For new or replacement work benches.

Made in any size to meet your requirements.

Available through selected industrial distributors in principal cities or write direct for sample and price list.

QUALITY RIMCO MILLWORK

ROCK ISLAND MILLWORK COMPANY
RESINWOOD DIVISION
Established 1868 Rock Island 4, Illinois

▲ For more details circle NED-13 H4 on enclosed inquiry slip ▲

Prosperity for All

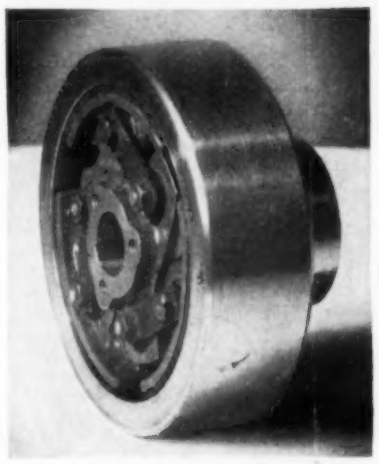
Better goods for more people will make prosperity for all! This theme practiced universally will banish the psychology of fear that leads to recession.

The number of new products offered to industry is an excellent barometer of tomorrow's business. Never in our experience have we received so many new or improved product announcements as now. Inquiry response from readers is hitting a new high. Sales and promotional efforts are being intensified. There is an ever-expanding market for industrial equipment.

Plants which are adapting this equipment and new manufacturing techniques will be able to supply the best possible goods to the most people at the lowest cost. This progress in industry is keyed to prosperity for all.

A. N. Gregg
EDITOR

CENTRIFUGAL CLUTCH COUPLING handles all types of misalignment



All types of misalignment are handled by Twiflex automatic centrifugal clutch coupling which is made in many sizes and types. Coupling improves starting conditions and provides smooth acceleration on drives for high inertia equipment such as ball mills, hammer mills, mixers, pulverizers and tube mills. It prevents excessive torque transmission during starting of textile machinery, wire drawing machinery and conveyors; torsional resonance on internal combustion engine drives, particularly compressors and generators; and provides automatic coupling on emergency and dual drive systems, as well as overload protection. Made by **Hilliard Corp.**, 40 W. Fourth St., Elmira, N. Y.

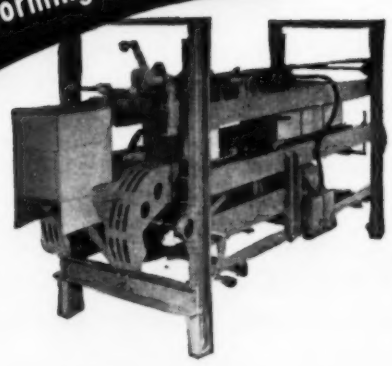
▲ For more details circle NED-14 H4 on enclosed inquiry slip ▲

Maintenance of Hydraulic Systems

Logansport Machine Co.—"A B C's on Maintenance of Air and Hydraulic Equipment" is title of 24-page cartoon-style booklet. Major reasons for unsatisfactory performance of such systems are pointed out, as are methods of avoiding them.

▲ For more details circle NED-15 H4 on enclosed inquiry slip ▲

A shorter, narrower, simpler, and better performing case sealer



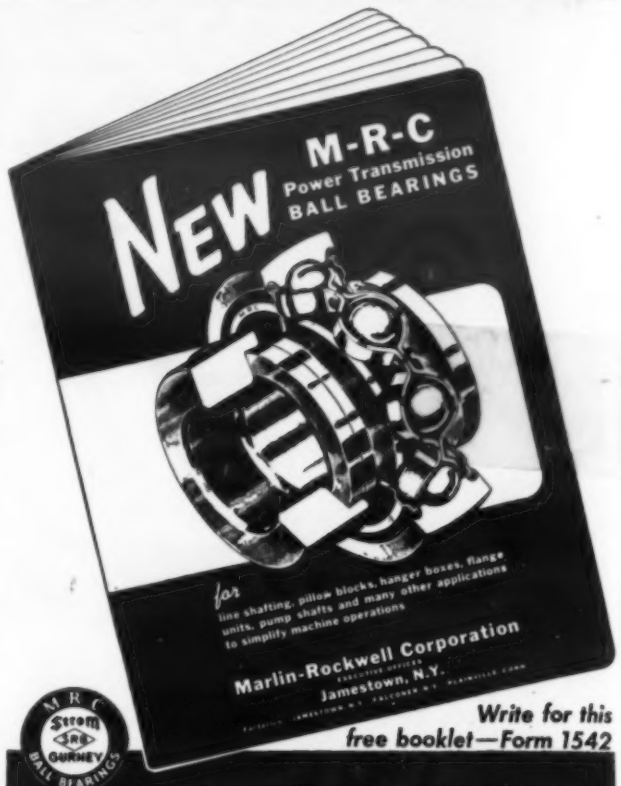
CAN BE MADE PORTABLE IF DESIRED

THE NEW A-B-C Junior CASE SEALER

The A-B-C Junior Case Sealer automatically seals corrugated shipping containers in only a fraction of the floor space ordinarily required. Operation is fast—trouble free—economical. A completely new flight chain construction virtually eliminates carton jamming . . . Three semi-automatic models are available to fit most case sizes. Write today for details and floor plans.

A-B-C PACKAGING MACHINE CORP. QUINCY, ILLINOIS

▲ For more details circle NED-16 H4 on enclosed inquiry slip ▲



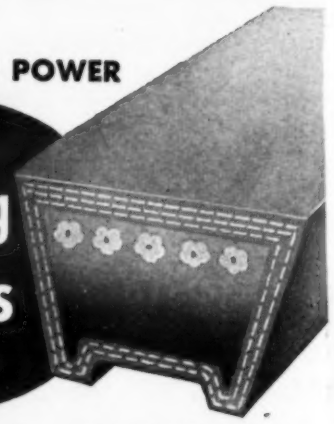
Write for this free booklet—Form 1542

MARLIN-ROCKWELL CORPORATION
Exec. Offices Jamestown, N. Y.

▲ For more details circle NED-17 H4 on enclosed inquiry slip ▲

FOR SMOOTH VIBRATIONLESS POWER

Browning FHP Belts



with the "SAFETY VALVE" feature

Uniformity is achieved by a specially designed safety channel in Browning FHP belts. During manufacture by a patented process, this channel adjusts in depth to compensate for inevitable variations in material quantities going into the mold. Side wall size and shape thus are held to *exact* specifications. Available in a wide range of sizes, with outside lengths in 1" increments up to 88".

Ask your Browning distributor or write us for Catalog V147.

Browning MANUFACTURING COMPANY MAYSVILLE, KENTUCKY

▲ For more details circle NED-18 H4 on enclosed inquiry slip ▲

FLAMELESS BLOW TORCH

for quick heat up to 750°

Use the Mamco Flameless Blow Torch on any application requiring a concentrated hot air blast. You can soften, form, mold and patch plastics, etc. easily with safety . . . The Mamco Flameless Blow Torch gives you quick heat up to 750° *without flame.*

Powerful Mamco electric motor 110-120 Volt AC and DC. Turbo type fan provides steady, strong air blast. Eight foot heavy duty cord. Double jacketed heater housing. Adjustable air intake. Order direct.

Price $28.50

Master APPLIANCE MFG. CO. RACINE, WISCONSIN

▲ For more details circle NED-19 H4 on enclosed inquiry slip ▲

moisture is a menace

Excessive humidity causes corrosion, fogging, fungus growth, and loss of dielectric strength.

DriAire's knowledge and experience in the proper application of dehydration could well offer the solution to your problems.

DriAire dehydrators and humidity indicators are available in many sizes and types. Your inquiries are invited.

DriAire

DRIAIRE INCORPORATED

SOUTH NORWALK, CONNECTICUT

For more details circle NED-20 H4 on enclosed inquiry slip

Incredible! ASPHALT MASTIC FLOORS for only 10¢ a sq. ft. (or less)

WE CAN PROVE IT!

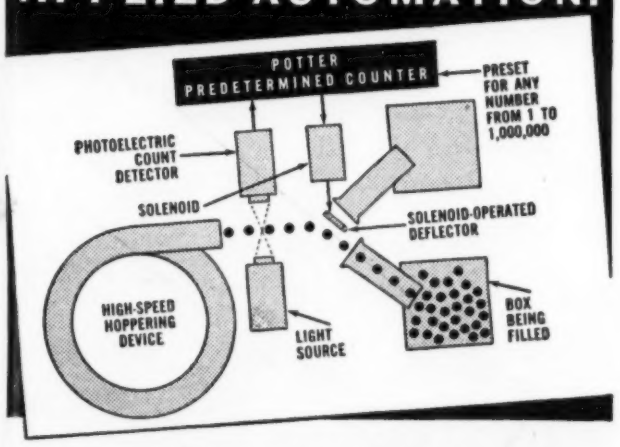
Now you can have — at this unheard-of price — a mastic floor of highest quality completely installed. The Asphalt Clearing House Division, with forty years' experience in asphalt flooring, has solved the riddle of high asphalt prices to save you up to three-quarters of your present cost.

INVESTIGATE! Write for this free descriptive booklet and price list! No obligation, no salesmen — that's how we save you money!

ASPHALT CLEARING HOUSE DIVISION
FLASH-STONE COMPANY, INC.
3723 Pulaski Ave., Philadelphia 40, Pa.

For more details circle NED-21 H4 on enclosed inquiry slip

APPLIED AUTOMATION:



HOW POTTER COUNTERS SAVED MONEY FOR CONTINENTAL CAN

Potter Predetermined Counters automatically speed 7,200 bottle caps (at thousands per minute) into consecutive cartons. Oversize batches (necessary with weight and volume measurement) are eliminated.

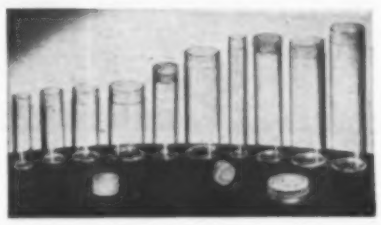
An economical Potter counter can automatize your packaging or control system. Counters for batches for from 1 to 1 million, accommodating 60,000 units per minute, are available. Also available is a complete line of detectors for converting length, flow, revolutions, etc., into pulses.

Write today, describing your problem. Potter applications engineers will work out the details. No obligation, of course.

Potter POTTER INSTRUMENT CO., INC.
115 Cutter Mill Road, Great Neck, L. I., N. Y.

For more details circle NED-22 H4 on enclosed inquiry slip

PLASTIC CONTAINERS
available in three types



Threaded top, shoulder vial and shell vial types of plastic containers, latter with polyethylene plug closure, are available from stock. First two container types are available in sizes from ½ x 2 in. to 1 x 4 in., while shell vial type sizes are 11/16 x 2 7/16 in. and 11/16 x ⅜ in. Containers can be enameled in any desired color, then printed with one or two additional colors, or they can be printed in one or two colors without the enameled background. Minimum order is 1000 plain or 2500 decorated containers. Samples are available. Made by **Lermer Plastics, Inc.**, Dept. P. P., 502 South Ave., Garwood, N. J.

For more details circle NED-23 H4 on enclosed inquiry slip

AUTOMATIC DRILL UNIT
spindle speeds range up to 7400 rpm

Series 24 self-contained automatic drill operates on a small volume of air, and can be run from a small portable compressor if necessary. It features built-in switches, relays and valves and can be mounted in any position in standard brackets. Unit weighs 88 lb including ⅓ or ½-hp motor and has ten spindle speeds ranging from 440 to 7400 rpm. Chuck capacity ranges from No. 60 drill to ⅜-in. and stroke is up to 3 in. Unit can be used for tapping, reaming, hollow milling and other similar operations, and can be mounted on standard drill press columns. An auxiliary circuit can be built in as standard equipment to synchronize stroke with other operations. Optional equipment includes electronic repeat cycle timer for deep-hole drilling and hydraulic feed control. Made by **Dumore Co.**, 1370 Seventeenth St., Racine, Wis.

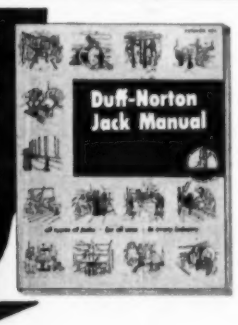
For more details circle NED-24 H4 on enclosed inquiry slip

Steel Casting Manufacture

Lebanon Steel Foundry—32-page illustrated brochure "Circle-L" covers the steel casting process from design and engineering to final applications. Patternmaking, mold and coremaking, furnace tapping, pouring, finishing operations, heat treating, testing and inspection are covered. Story of centrifugal castings is a point of interest.

For more details circle NED-25 H4 on enclosed inquiry slip

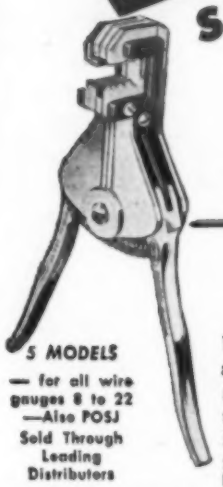
How to Reduce Jacking Costs!



Do you know about the new power jacks? The remote controlled hydraulic jacks? Jacks that lower loads automatically, safely and quickly? Do you know how to select the right jack for the job at hand? How to instruct workmen on the safe use of jacks and how to keep jacks in good working order? Duff-Norton, the world's oldest and largest manufacturer of all types of lifting jacks for every industrial use, has just published a new 40-page, illustrated jack manual—the most complete encyclopedia on the subject of lifting jacks ever attempted. This new manual contains complete specifications on more than 300 different types and sizes of ratchet, screw, and hydraulic jacks from 3 to 100 ton capacities, both manual and power operated. It contains 40 pages of useful information that will enable you to get lifting, lowering, pushing and pulling jobs done faster, safer, at lower cost. Write today for your copy of Bulletin 204-N. It's yours for the asking! **The Duff-Norton Manufacturing Co. P. O. Box 1889, Pittsburgh 30, Pa. Canadian plant—Toronto 6, Ontario.**

For more details circle NED-26 H4 on enclosed inquiry slip

ONE light squeeze STRIPS WIRE in 2 seconds!



IDEAL Stripmaster® Patented, No. 2,523,936

Fastest for all Light Stripping . . . Can't Crush Wire

Unique design gives "trigger-quick" action. Strips up to ⅞-inch. "Automatic" feature prevents crushing of stranded wire. Blade can be changed in a jiffy. Weighs only 10 oz.

5 MODELS — for all wire gauges 8 to 22 —Also POSJ Sold Through Leading Distributors

SEE ALSO THE IDEAL "E-Z AUTOMATIC" FOR HEAVY DUTY STRIPPING

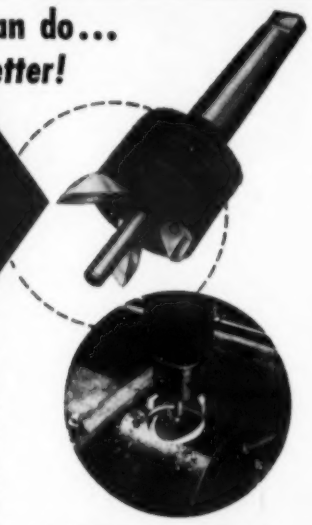
OTHER WIRING TOOLS
- ☐ Voltage Testers
- ☐ Fish tape, reels and pullers
- ☐ Cable rippers
- ☐ B-X cutters
- ☐ Fuse clip clamps
- ☐ Fuse pullers
- ☐ Test lites

IDEAL INDUSTRIES, Inc. 1032 Park Avenue, Sycamore, Illinois
Please send free catalog information on Stripmaster and other wiring tools as checked.
Name.....
Company.....
Address.....
City.....Zone.....State.....

For more details circle NED-27 H4 on enclosed inquiry slip

Does jobs no drill can do... Does many jobs *better!*

Clark "HOLE-MAKER"



Produces round, true holes in CASTINGS, FORGINGS, BOILER PLATE, THIN SHEET STOCK, PIPE, TUBING, ETC.; Drills CROWNED, CYLINDRICAL, FLAT OR WEDGED SURFACES!

No triangular shaped holes, no grabbing on break-throughs, no "walking" on starts with the Clark "HOLE-MAKER"! Produces full-gauge holes from start to finish. Removable pilot guides HOLE-MAKER straight and true even on intermittent cuts. Will also use pilot drill.

Ideal production tool on TURRET LATHES, CHUCKING MACHINES, RADIAL DRILLS, DRILL PRESSES, PORTABLE ELECTRIC and PNEUMATIC DRILLS. Excellent for rough boring, finishing and trepanning. Cuts all ferrous and non-ferrous metals and other materials. Saves money, replaces large drill inventory... Bores castings, forgings, etc. 3 to 10 times faster than single pointing!

5 ADJUSTABLE SIZES COVER I.D.'s from 1" to 6"
Specify straight shank or MT 2, 3, 4. Other tapers on order.

MODEL	CAPACITY
102	1"–2"
203	2"–3"
304	3"–4"
405	4"–5"
506	5"–6"

When ordering, specify material to be cut.

ROBERT H. CLARK COMPANY
9330 Santa Monica Blvd., Beverly Hills, Calif.

For more details circle NED-28 H4 on enclosed inquiry slip

Big work—bulky shapes—heavy jobs—drilled quicker, easier on Sibley Model E-25 Drilling Machine. 22" x 30" table; 25" swing; pedestal jack supports table; variable speed drive for drills ⅛" to 1"; 1½ h. p. motor; tachometer.

SIBLEY MACHINE & FOUNDRY CORP. SOUTH BEND 23, INDIANA

SIBLEY MACH. & FOUNDRY CORP. Dept. NED 8, South Bend 23, Ind.
Send complete story on Model E-25 with extra large table.
Name_____
Company_____
Address_____

For more details circle NED-29 H4 on enclosed inquiry slip

SAVE MONEY! Do it yourselves

REPAIR VALVES and FAUCETS Quick Easy with this O'Malley

INDUSTRIAL Master Set No. 5

An all-around VALVE and FAUCET *repair* set, with flat cutters to take care of all Jenkins type Disc Valves from ¼" to 2". Also conical cutters to reface plug or ball type valves (from ¼" to 2" 45°) as well as faucets, built-in tubs and showers . . . Packed in convenient, durable metal case. Will give long and completely satisfactory service. (This set is standard maintenance equipment in Chicago schools. Also on some U.S. warships . . . It belongs in *your plant!*)

No. 5 Master Set *Postpaid* $38.50

Money Back Guarantee

Faucet NU-SEATER Set No. 7

Enables you to easily remove cuts, pits and scale from faucet seats to stop dripping. Also tools for re-threading to install new seats. Handles all sizes to ¾". Contains 4 tap threaders, 3 cutters and 12 brass seats.

Set No. 7 *Postpaid* . . . $8.95

FREE Folder *Write for folder that illustrates and describes all O'Malley Industrial Kits—popular for 21 years!*

EDW. O'MALLEY VALVE CO., Mfrs.
11950 S. Halsted St., Chicago 28, Ill.

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Send for CAT. JD-53-E

AKRO-MILS, INC. Box 989-E AKRON 9, OHIO

For more details circle NED-35 H4 on enclosed inquiry slip

NEW GLAS-COL portable ELECTRIC MELTING POT

for melting asphalts . . tars . . pitches . . resins . . mastics . . and other viscous materials.

Ideal for repair jobs. This portable melter weighs only 15 lbs. Fits into your car trunk. No need to tussle with big, heavy, production melting equipment.

Use it for melting asphalt for roof jobs . . tar for sealing seams in concrete . . and many other repair and maintenance applications.

Plugs into any 115-volt outlet (1250 watts). 3½ Gallon capacity. Heating chamber Fiberglas insulated.

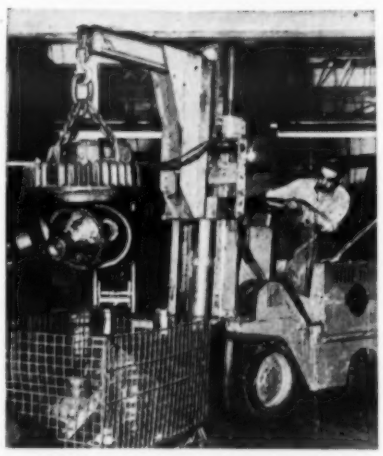
only $75.00

Ask for descriptive Bulletin 201. Glas-Col Apparatus Co., Inc., Dept. ND, 711 Hulman St., Terre Haute, Ind.

GLAS-COL MELTING POTS

For more details circle NED-31 H4 on enclosed inquiry slip

SMALL ELECTROMAGNETS for use with industrial trucks



Line of small electromagnets is designed for use with boom - equipped industrial trucks or other mobile materials handling equipment. They will lift ferrous scrap or machine stock, or can be used to position large parts. They are also usable for floor cleaning. Sizes ranging from 12½ to 36 in. diameter are available weighing from 155 to 1900 lb. The 29 in. unit will lift a 13,000 lb billet, 550 lb of machine cast pig iron, or 175 lb of steel turnings. Magnets have welded bottom plates to provide watertight seal. Single conductor, rubber armored cables are brought out of terminal boxes through compression glands and are secured to the magnet case by strain clamps. Made by **Electric Controller & Mfg. Co.**, 2850 E. 79th St., Cleveland 4, O.

For more details circle NED-33 H4 on enclosed inquiry slip

Are you pumping $$ into wrong pump sizes

Over 400 models of standard PIONEER and ROLLWAY pumps to choose from. Thus you can be sure of exactly the right pump for your job . . . capacity-tested at the factory. No need to pay extra for capacities not needed.

To save on pump costs, power costs, maintenance costs, installation costs and space, ask for complete Manual and Catalog #43.

Pioneer IMPELLER TYPE PUMPS (0 to 174 gpm 850 to 3450 rpm)

Rollway POSITIVE DISPLACEMENT LUBRICANT PUMPS (1 pt. to 60 gpm 200 to 500 rpm)

Headquarters 14300 Tireman Detroit 28, Mich. (FACTORY: Paris, Kentucky)

DETROIT HARVESTER Co. PIONEER PUMP Division

For more details circle NED-36 H4 on enclosed inquiry slip

NOW CHROMALOX GIVES YOU INTENSE FAR-INFRARED in packaged MODULAR panels READY TO ERECT and CONNECT

BUILT-IN
• BUS BARS
• INSULATION
• FRAME

Chromalox Electric Radiant Panels generate uniformly absorbed far-infrared heat for baking, drying, curing and other uses. Temperatures up to 700° F. are easily selected and accurately held with "dialed" controls.

THESE ADVANTAGES—AND MORE!

- Longer Wave Length—absorbed equally fast by all colors.
- High Intensity Radiation—more watts per square foot.
- Infinitely Variable Output—from 0% to 100% of capacity.
- Shatter-proof Construction—nothing to break or contaminate work.

GET THIS BULLETIN → It shows you how Chromalox Radiant Panels can save you time, money, work.

OVEN BUILDING SIMPLE AS A-B-C

1' x 4' and 2' x 4' pre-engineered panels quickly assemble into ovens.

Industrial Radiant Heating Division IB-27

EDWIN L. WIEGAND CO., 7509 THOMAS BLVD., PITTSBURGH 8, PA.

See other ad on pg. 67

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

For more details circle NED-32 H4 on enclosed inquiry slip

LIGHT WT. . . PORTABLE

Logan UNIVERSAL COUPLINGS permit "hooking-up" at either end of sections. Not necessary to turn end for end. All ends fit. A Logan feature.

Logan Wheel Conveyors are first choice where light-weight, portable conveyors are required. The free-running, ball-bearing wheels need but a minimum of grade for operation. In both Steel and Aluminum construction. Sturdy, dependable. For indoor or outdoor use. Send for literature.

WHEEL Logan Conveyors

LOGAN CO., 215 CABEL ST., LOUISVILLE 6, KY

For more details circle NED-34 H4 on enclosed inquiry slip

OILING
INKING
FLUXING
CLEANING
COATING
PASTING
LETTERING

New NU-AID LIQUID DISPENSER

This light, attractive, non-breakable 8-oz. container cannot be harmed by acids, alkalies, oils or solvents. The fluid contents can be brushed or spotted exactly where you want it. All you do is gently squeeze the plastic container to obtain the right amount of fluid, which can be applied by brush or spout. Write for a trial NU-AID DISPENSER, $2.00 postpaid. Quantity prices on request. (Dealer inquiries invited)

AIDS DEVELOPMENT CO. BOX 2704 CLEVELAND 11, OHIO

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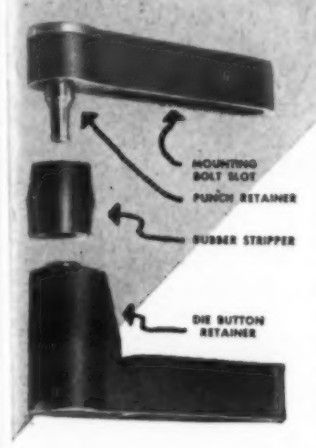
New

PUNCH & DIE BUTTON POSITIONING Flexibility with R-B Flex-Mount RETAINERS



Cut your set-up time for short production runs on light gauge metals . . . R-B Flex-Mount Retainers permit quick, easy and flexible mounting of punches and die buttons. For, Flex-Mount Retainers are easily bolted in any desired position on T slotted or drilled and tapped commercial die sets.

Standardized R-B punches and die buttons (round, square, oblong or special shapes to customer specifications) are used in these retainers. Stripping is accomplished with R-B rubber strippers or R-B rubber covered springs to eliminate costly metal strippers, retainer screws and springs.

Use R-B Engineering Service for Your Tough Piercing Problems.

RICHARD BROTHERS PUNCH DIVISION
ALLIED PRODUCTS CORPORATION
DEPT. 78 • 12629 BURT ROAD • DETROIT 23, MICHIGAN

▲ For more details circle NED-38 H4 on enclosed inquiry slip ▲

LET Ametron RECORDERS SOLVE YOUR COUNTING PROBLEMS

PULSE COUNT
TIME INTERVAL
REVOLUTION COUNT

for ANY counting or timing job!

Ametron Recording Counter

Consists of two basic electrical circuits, both normally open. Momentary closure of the counting circuit advances indexing device one step. Momentary closure of print circuit causes unit to print accumulated count. Automatic reset to zero available if desired. A wide variety of timing mechanism available as standard equipment.

This unit may also be furnished to record elapsed time in these increments: 1/10 minute, 1/100 minute, 1 second and 1/10 second. Counting unit may also be equipped for direct drive from a rotating shaft to count revolutions in units of one tenth.

• THE STANDARD OF ACCURACY SINCE 1888 •

Write for circular RC 15.

STREETER-AMET COMPANY
4101 N. RAVENSWOOD AVENUE • CHICAGO 13, ILLINOIS

▲ For more details circle NED-39 H4 on enclosed inquiry slip ▲

SEND FOR FREE SAMPLE Twisted Wire Brush

Note the FINE QUALITY and HIGH PRECISION typical of ALL MILL-ROSE BRUSHES

The sample brush we shall send you on request was made to meet the very close specifications of the original buyer. It was guaranteed exact diameter required plus or minus .001 inch. You will find it interesting, whether you are in engineering, shop or purchasing, as indicating what Mill-Rose can do to meet your needs for twisted wire brushes to perform many operations — cleaning, scaling, reaming, polishing — at lower cost.

Mill-Rose, in addition to brushes made to specifications, stocks a line of 56 standard sizes from 1/8" to 1" diameter in 1/16" increments and from 1" to 3" long — single and double spiral.

High quality work — faster production — lower costs — call for high precision brushes. The sample brush will tell you how well we qualify to manufacture to your specific needs. Write today.

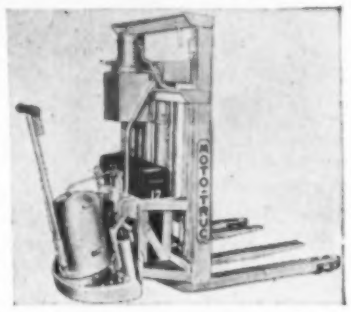
Write for Twisted Wire Brush Catalog
56 STANDARD SIZES in Stock

HIGH PRECISION INDUSTRIAL BRUSHES TWISTED IN WIRE

The MILL-ROSE Company 1985 EAST 59th STREET CLEVELAND 3, OHIO

▲ For more details circle NED-40 H4 on enclosed inquiry slip ▲

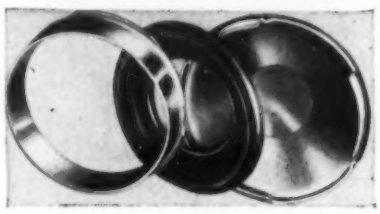
"JACK KNIFE" TRUCK action facilitates ramp climbing



Operational range of standard outrigger type Hi-Lift stacking trucks is increased through incorporation of "jack knife" action. Standard truck has tendency to "hang up" when it encounters a ramp or slight rise. With this feature, optional on complete line of trucks and adaptable to those presently in operation, truck frame is raised to give sufficient clearance by a hydraulic pump and ram unit. Made by **Moto-Truck Co.**, 1961 E. 59th St., Cleveland 3, O.

▲ For more details circle NED-41 H4 on enclosed inquiry slip ▲

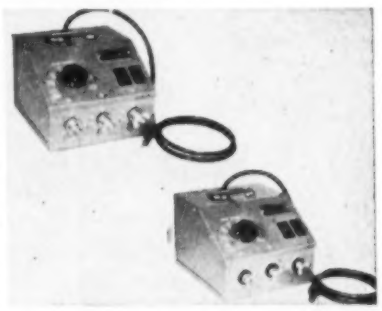
PRESSURE CONTAINER CLOSURE is self-sealing up to 600 psi



Gasket of this bayonet type closure for pressurized containers seals automatically when internal pressure rises. Closure consists of cover, gasket and bayonet neck for welding or brazing to the container. It is self-sealing up to 600 psi. Inner edge of gasket covers orifice, forming a simple, sanitary valve for charging or discharging gas or liquid. Covers and necks are usually made of stainless steel, but may be made of other suitable materials, including plastic. Gasket is resistant to oils and fats. Made by **Nilsen Mfg. Co.**, Peter St., Addison, Ill.

▲ For more details circle NED-42 H4 on enclosed inquiry slip ▲

SOLDERING POWER UNITS rated at 500 and 1000 w



Expanded and improved line of Glo-Melt resistance soldering power units includes model 105-B2 rated at 500 w and 105-C1 rated at 1000 w. Units have snap switch and pilot light and are enclosed in a ventilated steel cabinet finished in gray Hammerloid enamel. Three-way output terminals combined with a rotary switch give 24 different controlled heats. Transformers are heavy duty type and both units are available for 115 or 230 v. Made by **Wassco Electric Products Corp.**, 128 W. Cass St., Joliet, Ill.

▲ For more details circle NED-43 H4 on enclosed inquiry slip ▲

SPLIT-SECOND ELECTRONIC TIMING with no-filament tube!

Split seconds the EASY way — use a CK Electronic Timer

Easy Starting . . .
No warm-up, through use of cold-cathode tube. Immediate re-cycling possible. Momentary - contact operation if desired.

Easy Setting . . .
Short intervals can be spread over the entire dial. Standard ranges: 1.5, 3, 6, and 12 seconds.

Easy on space . .
Only 3⅞" wide by 3" deep by 4⅞" high.

Easy on cost . . .
$29.00, or $32.00 with momentary-contact feature.

— For full details, write, wire, or phone —

Farmer ELECTRIC COMPANY
WABAN, MASSACHUSETTS

▲ For more details circle NED-44 H4 on enclosed inquiry slip ▲

fluids CAN'T PENETRATE this barrier

This Dome Nut SEALS WITHOUT SEALING COMPOUNDS

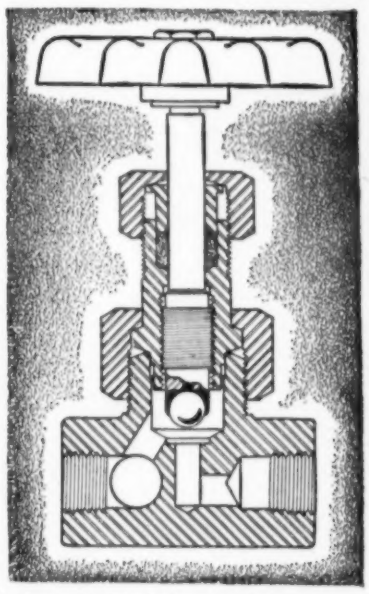
SPECIFICATIONS
Conforms to applicable requirements of AN-N-5. BUNA-N type seal conforms to MIL-R-6855 for aircraft fuels Types 1, 2, and 3. Temperature range: −80°F to +225°F continuous operation. Pressure range: ±50 psi constant or fluctuating.

This self-sealing, self-locking dome nut is being specified by more than 11 major aircraft manufacturers, for integral fuel tank sealing. Floating nut with stationary seal (floats .025 all directions) is unaffected by successive bolt installations. Reduces installation time, weight and maintenance.

Nutt-Shel
811 Airway, Dept. NED
Glendale 1, California
Citrus 4-4191—CH 5-3693

▲ For more details circle NED-45 H4 on enclosed inquiry slip ▲

NEW! BALL VALVE for liquids, gas or steam



Here's a radically-new forged steel valve for general heavy industrial use. Can't leak . . . practically never wears out . . . costs little or no more than ordinary valves!

In place of a disc or plug, the new Foxboro Ball Valve has a retained, free-rolling stainless steel ball that exposes new surface to seat at every closing.

Foxboro Ball Valves handle pressures to 3000 psi. Available in straight-thru and angle types. Two or four connections to simplify piping. ¼" size. Write for detailed folder. **The Foxboro Company, 668 Neponset Avenue, Foxboro, Mass., U.S.A.**

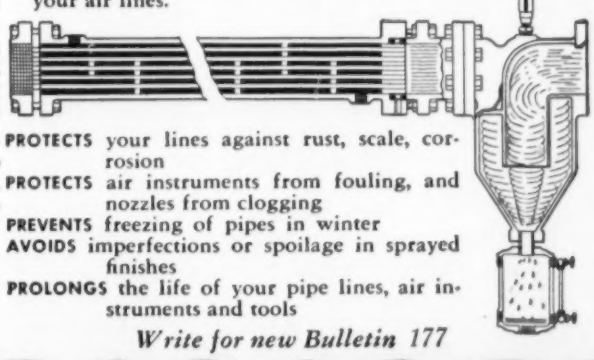
FOXBORO INSTRUMENTATION
REG. U.S. PAT. OFF.

▲ For more details circle NED-46 H4 on enclosed inquiry slip ▲

You Can be Sure of Clean Dry Air for your Compressed Air Tools with ADAMS Aftercooler and Cyclone Separator

3500 Gallons
1 YEAR'S water extraction from air lines equipped with Adams Aftercooler and Cyclone Separator.

• Reducing compressed air temperature to within 10° of the cooling water, Adams Equipment condenses and removes destructive water and oil vapors from your air lines.



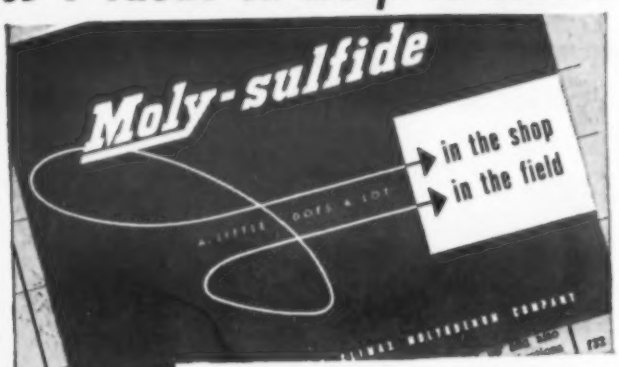
PROTECTS your lines against rust, scale, corrosion
PROTECTS air instruments from fouling, and nozzles from clogging
PREVENTS freezing of pipes in winter
AVOIDS imperfections or spoilage in sprayed finishes
PROLONGS the life of your pipe lines, air instruments and tools

Write for new Bulletin 177

R.P. ADAMS CO., INC. 227 E. PARK DRIVE BUFFALO 17, N. Y.

▲ For more details circle NED-47 H4 on enclosed inquiry slip ▲

154 ideas on ways to use...



154 varied applications of molybdenum sulfide in the shop and in the field are described in a new booklet now available. This solid-film lubricant has demonstrated unique anti-friction properties under conditions of extreme pressure, high velocity, elevated temperature, or chemical attack.

The 40-page booklet contains the records of solved lubrication problems—some might solve your own. Write now on your business letterhead for this booklet.

Moly-sulfide
A LITTLE DOES A LOT

The lubricant for extreme conditions

MS-6A

Climax Molybdenum Company
500 Fifth Avenue, New York City 36, N.Y.

▲ For more details circle **NED-51 H4** on enclosed inquiry slip ▲

REPUBLIC "LO-TORQ" SELECTOR VALVE

- 0-6000 psi service
- Low turning torque
- Panel mounting
- Semi-steel, bronze, aluminum alloy
- No leakage at any time
- 3 types of portings

Write for catalog No. 454 for complete information.
Distributors in principal cities from coast to coast.

132

RM REPUBLIC MANUFACTURING CO.
15655 BROOKPARK ROAD • CLEVELAND 11, OHIO

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ARMSTRONG-BRAY
GEAR and WHEEL PULLERS

Quickly and easily pull gears, wheels, pulleys and bearings off of shafts without damage or breakage.

Improved designs make them easy to set up and safe in use—the harder the pull the tighter the grip.

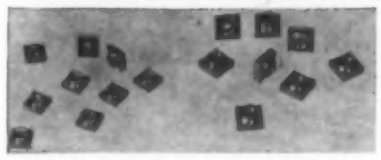
12 types, 40 sizes—2-arm, 3-arm, standard and special STEELGRIP Pullers with drop forged arms and heat treated screws as well as CHAINGRIP Universal Pullers that reach to considerable distances from end of shaft.

Write for Catalog

ARMSTRONG-BRAY & CO.
5362 NORTHWEST HIGHWAY
CHICAGO 30, U.S.A.

▲ For more details circle **NED-53 H4** on enclosed inquiry slip ▲

THREADED FASTENERS
for attaching to sheet metal



Cadmium - plated steel fasteners are designed to provide permanent threads in sheet metal. They are either hammered or punched into a hole in the metal, and are held against screw torque by four raised corners which imbed themselves in the surface of the sheet. A collar around the fastener bites into the side of the hole to anchor it against reverse fall out. Quintlock fasteners will resist up to 87 lb-in. of screw torque in aluminum sheet. They are available in 4-40, 6-32, 8-32, 10-32 and ¼-20 machine screw sizes with collar lengths to fit sheet thicknesses from 0.050-in. Made by **Fox Products Co.**, 4718 N. Eighteenth St., Philadelphia 41, Pa.

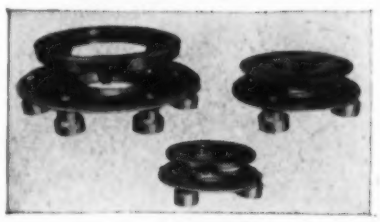
▲ For more details circle **NED-54 H4** on enclosed inquiry slip ▲

WELDING TRANSFORMER
compact multiple point unit

Exceeding minimum requirements of JIC standards for type 1-A transformers is this compact unit welding transformer. Developed for portable, multiple point, package unit and indirect series welding applications, it is enclosed in a sheet metal housing with cast aluminum bells. Tap switch for controlling secondary voltage is integral with one of the bells. Models rated at 50, 60 and 70 kva at 50 per cent duty cycle are available. Made by **Sciaky Bros., Inc.**, 4517 W. 67th St., Chicago 38, Ill.

▲ For more details circle **NED-55 H4** on enclosed inquiry slip ▲

CENTRIFUGAL SWITCHES
now available for motors up to 5 hp



Designed for use as a control for any mechanical or electrical device with rotary motion, Syncro - Snap centrifugal switches are now available in three models, the largest of which is suitable for units rated up to 5 hp. Throw out speeds of the switches are adjustable and are accurate to ±2½ per cent. Snap-action eliminates fluttering or chattering. Action is determined by speed alone, regardless of voltage or load. Made by **Torq Engineered Products, Inc.**, 1062 Interstate St., Bedford, O.

▲ For more details circle **NED-56 H4** on enclosed inquiry slip ▲

Data Book Available!

WASHERS and METAL STAMPINGS

Write today for your free copy of this booklet that contains useful information on:

TENSION WASHERS • WIRE TERMINALS • GENERAL STAMPINGS • FRICTION WASHERS • BLANKING DIES • PROGRESSIVE AND COMPOUND DIES • DISHED BLANKS • FINISHING WASHERS • STANDARD GAUGES

Quadriga has a press capacity up to 150 tons, depth of draw to 4 in.—also, new production line facilities for job work and parts assembly service. It may pay you well, in terms of lower assembly costs, to ask about this service. When you request our booklet—ask about this, too.

THE QUADRIGA MANUFACTURING CO.
221 W. GRAND AVE. CHICAGO 10, ILL.

▲ For more details circle **NED-57 H4** on enclosed inquiry slip ▲

Lightweight Pallet Truck is Easiest To Pull . . .
. . . never needs greasing

Here's the best hydraulic pallet truck buy in years! New Lewis-Shepard Model HPL weighs only ½ as much as standard trucks . . . handles loads up to 2000 lbs. . . . costs you less to buy . . . and it's the easiest pulling truck made!

Factory-sealed ball bearings in the HPL eliminate periodic greasing . . . virtually eliminate all maintenance . . . insure longer truck life!

Get all the facts on this new, low cost, lightweight truck. Write for Circular 26A . . . TODAY!

The Most Complete Line of Materials Handling Trucks

LEWIS-SHEPARD
732-8 WALNUT ST., WATERTOWN 72, MASS.
The "MASTER" Line

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For faster loading with greater safety . . .

Magcoa Dockboards, made of light-weight heavy-duty magnesium (¼ the weight of steel), speed loading and unloading . . . reduce accident and insurance rates . . . and pay for themselves. Every Magcoa Dockboard is carefully fitted to your specific handling requirements as to size, capacity, dock-to-carrier span, equipment under-clearance and other important factors.

Write today for the free new *Dockboard Facts File.*

MAGNESIUM COMPANY OF AMERICA
MATERIALS HANDLING DIV. • EAST CHICAGO 6, IND.

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with **MULTI-CLEAN CONCRETE FLOOR FINISHES** *and* **THE MULTI-CLEAN METHOD**

Concrete floor maintenance ceases to be a time killer and financial burden with the efficient, economical Multi-Clean Method. Multi-Clean Neo-Dry Concrete Sealer or Multi-Clean Concrete Preserver fortifies concrete against abrasion, oils, acids. Eliminates flaking and dusting. Conditions surface for heavy traffic by imparting a tough, sanitary finish . . . Is an excellent base for Multi-Clean Anti-Slip Waterproof Wax.

Eliminate long hours of scrubbing and sweeping with the Multi-Clean Scrubber and Multi-Clean Wet-Dry Vacuum, a floor maintenance team unexcelled for reducing floor care time and costs on every type of floor. Write us about your floors and we will show you how to profit by using the Multi-Clean Method.

Write Multi-Clean Products, Inc., Dept. NE-8 for more information.

Multi-Clean All-Purpose Scrubber

Multi-Clean Wet-Dry Vacuum

MULTI-CLEAN PRODUCTS, INC.
2277 Ford Parkway
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free! FLOOR MANUALS—Handy file size, each manual deals with a specific type of floor, its characteristics and care . . . concrete, terrazzo, wood, asphalt and rubber tile, linoleum.

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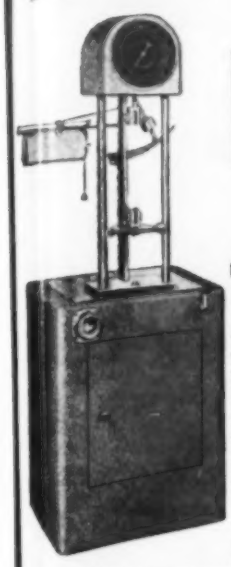
small COMPACT TESTER

large ACCURATE RANGE



DILLON

multi-low-range universal

TESTER

A portable laboratory instrument that is accurate to ½ of 1%. Tests paper, thread, fabrics, plastics, springs, film, cord, wire, leather, resins, adhesives, glass, wood, ceramics, felt, cardboard, bakelite, insulation and any other materials which fall within its range. Has 5 scales: 0-10, 0-25, 0-50, 0-100 or 0-300 lbs.

Stress-strain curve automatically recorded on graph sheets. Limit switch prevents overrun. Indicates load as it is applied. Accessories permit transverse, tensile, compression and shear testing easily and economically. Speeds from 0" to 20" per minute. The ultimate in fine testing equipment yet low in cost.

Write or wire for illustrated bulletin—Today

W. C. DILLON & CO., INC.

14620NE Keswick Street • Van Nuys (Suburb of Los Angeles), Calif.

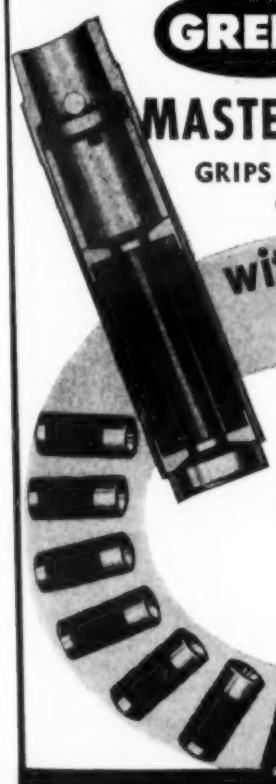
For more details circle NED-61 H4 on enclosed inquiry slip

GREEN adjustable-grip

MASTER FEED FINGER

GRIPS ANY SIZE OR KIND OF BAR STOCK

without scratching or scoring!



- Synthetic rubber inserts protect bar stock from scratching or scoring.
- Tension is uniform . . . prevents distortion when thin-wall tubing is used.
- Simple construction eliminates maintenance. Only four parts . . . outer sleeve, rubber insert, tension sleeve and combined locking nut and feed tube adapter.

Write for illustrated descriptive literature.

GREEN MANUFACTURING CO.

122 S. PRAIRIE AVE. • ROCKTON, ILLINOIS

For more details circle NED-62 H4 on enclosed inquiry slip

Now, for the first time . . .

Standard Verson Press Brakes

Available from Stock!

The 1062
25 tons capacity
(16 ga. x 78")
$2,190.00 as shown

The 16-48
15 tons capacity
(16 ga. x 48")
$1,455.00 as shown

(less dies)

• Quality-built standard Verson Press Brakes offer the small shop big brake standards of design and construction at modest cost. For the big shop they offer an economical way to avoid tying up big machines on odd jobs. Write for descriptive bulletin.

Verson

VERSON ALLSTEEL PRESS CO.

S. Kenwood Ave., Chicago 19, Ill. So. Lamar at Ledbetter Dr., Dallas, Tex.

For more details circle NED-63 H4 on enclosed inquiry slip

TOOL BALANCER

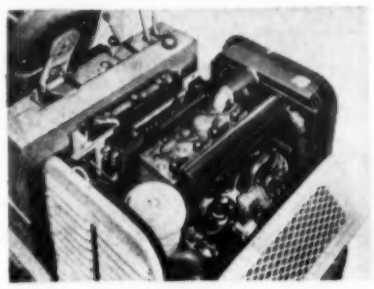
suspends weights up to 5 lb

All adjustments are made on the outside of the model 7472 balancer for suspending all types of portable air or electric tools, gages or fixtures weighing up to 5 lb. The 2-lb unit has in-line suspension which prevents twisting or turning when cable is pulled out. Cable is sheathed in wear-resisting nylon, is 5 ft long and can be replaced by disassembling the housing halves. Made by **Aro Equipment Corp.**, Erie St., Bryan, O.

For more details circle NED-64 H4 on enclosed inquiry slip

GAS-ELECTRIC POWER UNIT

for electric industrial trucks

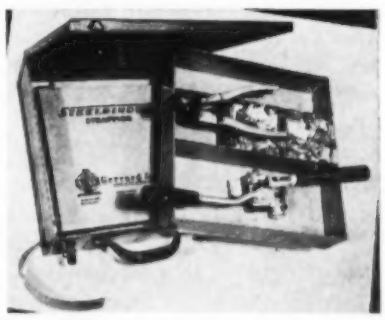


Sit-down type electric trucks of 2000 to 5000-lb capacity can accommodate the model HA-3 gas-electric power unit without need for seat alteration. Instrument panel is located within easy reach and view of the operator and fuel tank and starting battery are in compartments outside the housing. Muffler is inside the housing. A hinged cover and side plate permit easy access to engine accessories. Made by **Ready-Power Co.**, 3832 Grand River Ave., Detroit 8, Mich.

For more details circle NED-65 H4 on enclosed inquiry slip

STEEL STRAPPING KIT

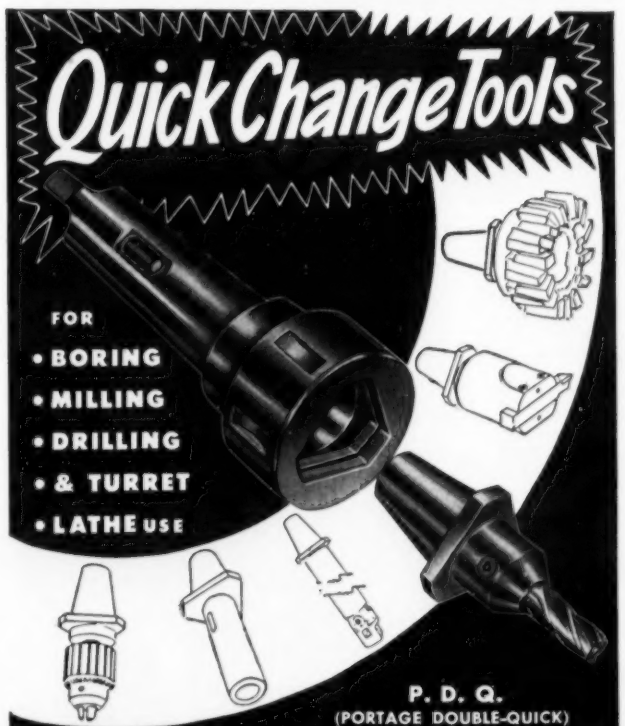
portable kit weighs 19 lb complete



Compact and portable, No. 157 steel strapping kit is designed for use by maintenance men in a wide variety of industries. It consists of a binding tool which uses ⅛, ½, ⅝ or ¾-in. strapping from 0.015 to 0.025-in. thick without adjustment, a strap cutter and seals. Carrying case measures 12½ x 12½ x 4 in. It is designed to take 200-ft packaged coils of strapping, available in a wide variety of metals. Made by **A. J. Gerrard & Co.**, 1954 N. Hawthorne Ave., Melrose Park, Ill.

For more details circle NED-66 H4 on enclosed inquiry slip

Quick Change Tools



FOR
- BORING
- MILLING
- DRILLING
- & TURRET
- LATHE USE

P. D. Q.
(PORTAGE DOUBLE-QUICK)

Changes from one tool to another is a matter of seconds. Three point locking feature and tapered shank assures repositioning and eliminates "run out."

Send for catalog describing individual holders and adapters or for specific information on your machine tools.

PORTAGE Double-Quick TOOL CO.

1043 Sweitzer Avenue • Akron 11, Ohio

For more details circle NED-67 H4 on enclosed inquiry slip

WEBB hand pushed TROLLEYS

Webb Hand Pushed Trolleys are sturdily built for long life and minimum maintenance. Hardened steel wheels equipped with retainer type ball bearings assure long wearing properties and ease of operation. Triple labyrinth seals keep lubricant in and dirt out. Side guide rollers effectively eliminate binding and excessive wear, especially when moving loads around curves. For simple, inexpensive and easy handling of materials, use Webb Hand Pushed Trolleys.

P-2530 TROLLEY
½ Ton Capacity
4" to 12" I-BEAM

Write for Bulletin No. 453:

JERVIS B. WEBB CO.

Conveyor Engineers and Manufacturers

8921 ALPINE AVE. • DETROIT 4, MICH.

Offices In Principal Cities

For more details circle NED-68 H4 on enclosed inquiry slip

ONE WEEK DELIVERY!

ON THE New Advanced CARTER CYLINDER WITH ALL THESE FEATURES

CARTER

- Greater Power
- More Compactness
- Higher Safety Factors
- Less Maintenance
- More Versatility

. . . AND LOWER COST TOO!

The most "designable" cylinders in America today! That's what designers think about the new Carter line. They're so compact, powerful, foolproof, and reasonable in cost that they fit in anywhere. To make your product better, more dependable, and less expensive to build or maintain, check on the new complete Carter line today.

AIR

Send for your copy of the complete CARTER Air Cylinder Bulletin No. 100 for information on parts, prices, dimensions, specifications, and mounting styles.

HYDRAULIC

Free bulletins on both the CARTER 750 psi series and the 1500 psi hydraulic series. All essential information. Write for Bulletin 750 or Bulletin 1500, or both.

Carter Controls, inc.

2876 Bernice Road • Lansing, Illinois • Phone 1305

"America's Newest Line of Cylinders"

For more details circle NED-69 H4 on enclosed inquiry slip

STOP PROFIT-ROBBING ACCIDENTS

WITH PRODUCTION-BOOSTER WAYNE HOSE REELS

EASILY REACHED

OUT OF THE WAY OVERHEAD

INSTALLED ANYWHERE

REMOVE ACCIDENT HAZARDS: No suspension cables or coils of loose hose to trip over. Operator draws out only the hose length needed, releases it for automatic rewind when he is finished.

RELIEVE WORK FATIGUE: Keep tools out of the way but within easy reach, cut waste motion. Automatic uptake positions tool directly over or beside work. Finger-tip control of tools.

PROVIDE SAFER EQUIPMENT: No electric motor needed. Reel is spring-activated.

The Wayne Production-Booster Hose Reel promotes high-speed assembly and production as well as safety. Turns your average operator into a skilled craftsman by making every motion count. You save wear, tear, and breakage, too, on hose and costly tools. Savings possible in hose life can offset cost of reel. Write for illustrated data folders.

THE WAYNE PUMP COMPANY
SALISBURY, MARYLAND
Toronto, Canada

Wayne NATION WIDE SERVICE

For more details circle NED-70 H4 on enclosed inquiry slip

Your insides feel like a SAND STORM ?

YOU NEED A

DUPOR AUTOMATIC

Water-Cooled Respirator

Sponge filter saturated in cool, clear water provides moist air for comfortable breathing. Ideal protection against dust, fumes, smoke, paint spray. Full panorama visibility. Can be worn with goggles or glasses. Work refreshed, order a water-conditioned respirator today! Sample, $2.00 postpaid.

H. S. COVER, SOUTH BEND, IND.

"Respirators for Industry since 1894"

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A HANDY PUMP around the Plant!

Ready for Action Anywhere—Anytime

A wide range of drainage and water handling jobs are "right down the alley" for this powerful, easy-to-handle pump. It's only 20" x 13" x 19". Weight only 84 pounds. Suction 1½"; Discharge 1½". Efficient and economical to operate. Sturdy construction. Costs little for maintenance.

You can pump up to 5,400 gallons per hour against a 15-foot head or 600 gallons per hour against an 80-foot head with the Deming Fig. 3304 Portable Self-priming Centrifugal Pump. You can get it in bronze fitted, all iron or all bronze construction. Impeller is mounted directly on engine shaft. Double rotary type seals are furnished with all units. Pump shown is powered with a Briggs & Stratton Model "6FB" 1½ H.P., four cycle, air cooled gasoline engine having a high tension magneto. Fig. 341 strainer included with each unit. Write for complete data or ask your Deming Distributor.

The DEMING Co.

520 BROADWAY • SALEM, OHIO

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with PLASTIC ROCK!

Trowel a smooth, tough, malleable surfacing right over your old concrete or wood floor.

Plastic Rock comes complete, packed in barrels; nothing more to buy; no "formula" to confuse. Simply mix and trowel over old floor; adheres to concrete, wood, steel; average depth ½"; perfect feather edge; hundreds of tons rolling on steel wheels only improve it. Spark-proof, skid-safe wet or dry; dustless, noiseless; cannot splinter, crumble, curl or loosen. Used by largest industries and railroads.

ASK FOR REPORT 220-N-8.

UNITED LABORATORIES, INC.

16804 Euclid Avenue, Cleveland 12, Ohio

FLOORING • ROOFING • SPECIAL PAINTS

Field Representatives Coast to Coast

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HYDRAULIC BRIDGE CRANE

built in capacities up to 50 tons

Infinite control from a creeping speed to an accelerated pace by hydraulic power is a feature of this overhead bridge crane. Braking is effective through bridge power and is also in effect at all times when bridge is not in motion. The 15-ton bridge capacity, double trolley unit shown operates on 1000 psi hydraulic pressure and has a 68-ft span. Each trolley has a 7½-ton capacity. Lubricated-for-life wheel bearings, Vickers pumps and motors and Parker hydraulic fittings and valves are utilized. All welded bridge and end truck are of box type "fish belly" design. Cranes with capacities up to 50 tons can be manufactured. Made by **Overbeke-Kain Co.,** 20979 Aurora Rd., Bedford, O.

▲ For more details circle **NED-74 H4** on enclosed inquiry slip ▲

COLOR METER

for matching, mixing and specifying

Davis-Bruning Colorimeter provides a permanent "color memory" for matching, mixing, shading and specifying colors. It reduces the shade as seen by the eye to a simple numerical formula which does not vary from operator to operator. Light from the sample is compared in the machine to light from a series of standard color plaques. This can be varied until the two are identical. Direct reading drums then show the percentage of each reference color used. Diffused lighting eliminates confusion from gloss and texture differences. With a little experience, an operator can obtain color matches to within 0.5-NBS color unit. Distributed by **Fisher Scientific Co.,** 715 Forbes St., Pittsburgh 19, Pa.

▲ For more details circle **NED-75 H4** on enclosed inquiry slip ▲

Materials Handling Systems

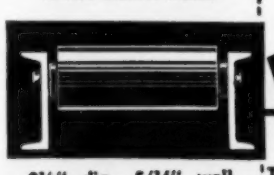
Gifford-Wood Co.—32-page illustrated bulletin "Engineered Materials Handling Systems" shows range of conveying and materials handling systems which are necessary to cover today's industry requirements. Specific examples include bulk chemicals system, chip handling system, drum handling, bulk grain handling, coal handling, sand and flask foundry system and a tray elevator for the textile industry. Nine different types of conveyors, elevators and feeders are discussed.

▲ For more details circle **NED-76 H4** on enclosed inquiry slip ▲

HOW DO YOU SELECT A ROLLER CONVEYOR?

1" dia., 14 gauge steel roller, ¼" hex axle, angle frame.

2¼" dia., 16 gauge steel roller, ⅜" hex axle, formed channel frame.



3½" dia., 5/16" wall steel roller, 1-1/16" hex axle, structural channel frame.

BUSCHMAN features a *complete* range of roller diameters, from 1" to 3½" . . . wide selection of bearings to fit individual operating conditions . . . choice of frame types and sizes . . . widths and centers of rollers to specifications. To be sure the conveyor will do *your* job best —

LET A BUSCHMAN ENGINEER RECOMMEND!

(No obligation, of course)

Write today for Catalog No. 60

PRODUCE MORE ... FOR LESS with Buschman Conveyors

C-146-EWB

THE E. W. BUSCHMAN COMPANY

4482 Clifton Avenue • Cincinnati 32, Ohio

REPRESENTATIVES IN PRINCIPAL CITIES

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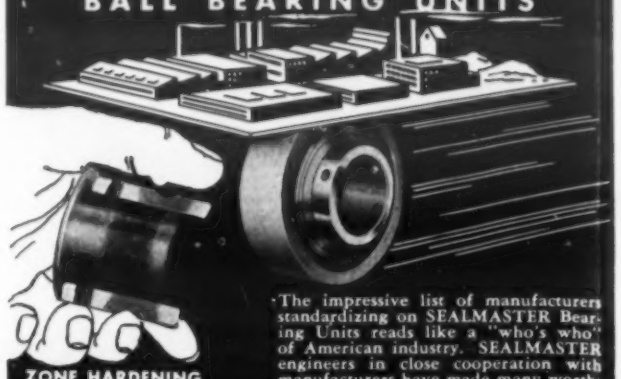
modern industry rolls on SEALMASTER BALL BEARING UNITS



ZONE HARDENING

Latest SEALMASTER engineering advancement is *Zone Hardening* — a completely automatic heat treating process — assuring greater efficiency and added bearing life.

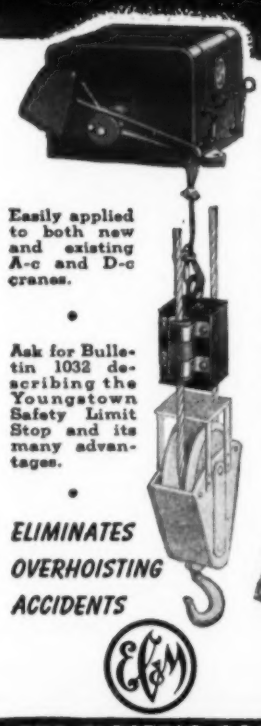
The impressive list of manufacturers standardizing on SEALMASTER Bearing Units reads like a "who's who" of American industry. SEALMASTER engineers in close cooperation with manufacturers have made many worthwhile contributions to the efficiency of both products and manufacturing processes. It will always be a SEALMASTER policy to assist manufacturers in their bearing problems. Write for Catalog 845.

BEARING DIVISION
STEPHENS-ADAMSON MFG. CO.
12 RIDGEWAY AVENUE
AURORA, ILLINOIS

SEALMASTER

▲ For more details circle **NED-78 H4** on enclosed inquiry slip ▲

Safety LIMIT STOPS for A-c and D-c Cranes by EC&M



Easily applied to both new and existing A-c and D-c cranes.

•

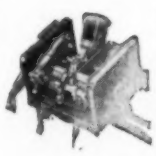
Ask for Bulletin 1032 describing the Youngstown Safety Limit Stop and its many advantages.

•

ELIMINATES OVERHOISTING ACCIDENTS

Not only disconnects the motor from the line, but stops the motor quickly. On D-c cranes, where high hoisting speeds prevail, dynamic braking aids in bringing the hook block to rest. These Limit Stops are operated directly by the hook block, hence stretching of the hoisting cables does not affect the tripping point.

By removing the fear of an overhoisting accident, the YOUNGSTOWN Limit Stop enables the crane operator to do better work.

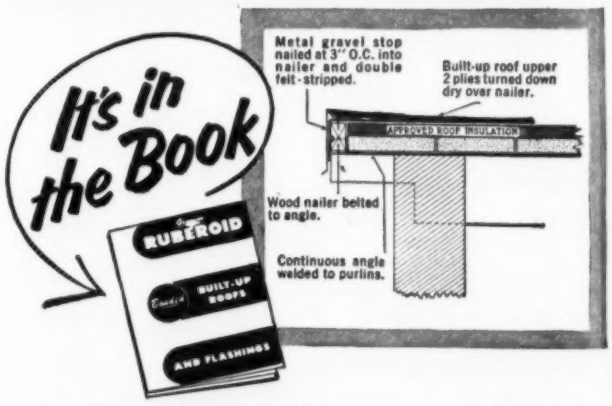


High interrupting capacity—Two normally open and two normally closed contacts, mechanically interlocked and with wide, vertical opening, always assure positive interruption of the hoist motor current.

THE ELECTRIC CONTROLLER & MFG. CO.

2698 EAST 79TH STREET • CLEVELAND 4, OHIO

▲ For more details circle **NED-79 H4** on enclosed inquiry slip ▲



The answer to all your roofing maintenance problems is in Ruberoid's Built-Up Roofing Specification Book. There's a complete specification with detail drawings, like the one above, to meet every condition—Smooth Surfaced Asbestos, Coal Tar Pitch or Special Bitumen with gravel or slag surfacing, and smooth or gravel-and-slag surfaced asphalt.

Because Ruberoid makes *every type* of built-up roof, Ruberoid roofers are not prejudiced in favor of any one type. Because Ruberoid has been a leader in the field for 60 years, you can depend on the right materials and the right specification through Ruberoid Approved Roofers.

Give your roof a thorough check-up now, *and write for Ruberoid's free Built-Up Roofing Specification Book. The Ruberoid Co., 500 Fifth Avenue, New York 36, N. Y.*

The RUBEROID Co.

ASPHALT AND ASBESTOS BUILDING MATERIALS

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Free

NEW BELT CONVEYOR CARRIER DATA

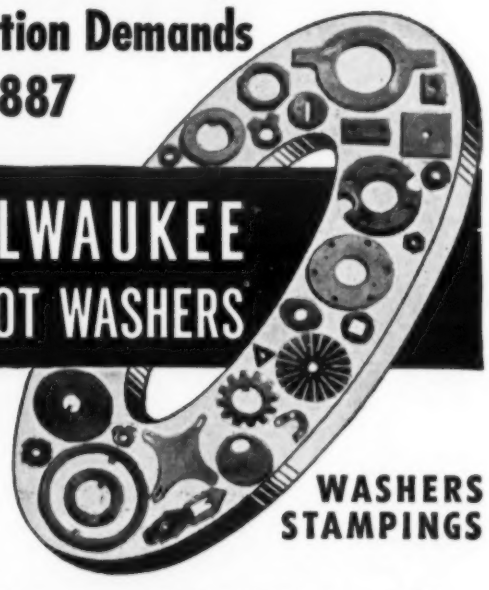
Full information on new low-priced 745 series belt conveyor carriers now available for immediate delivery from stock. New carrier simplifies ordering and stocking for many applications. Bulletin No. 554 tells how to order and install—describes design features usually found only in higher priced carriers. Mail coupon for your copy today.

745 Carriers are available from stock for 18", 24", 30" and 36" conveyor belts.

STEPHENS-ADAMSON MFG. CO.
Standard Products Division
12 Ridgeway Ave., Aurora, Ill.
Please send me Bulletin 554 on 745 Carriers
Name.....
Company.....
Address.....
City.....Zone.....State.....

For more details circle NED-81 H4 on enclosed inquiry slip

Geared to Industry's Production Demands Since 1887



MILWAUKEE WROT WASHERS

WASHERS STAMPINGS

Offering the most complete line of washers available today . . . all types and sizes, all materials, all finishes. More than 25,000 sets of dies. Let us quote on your requirements.

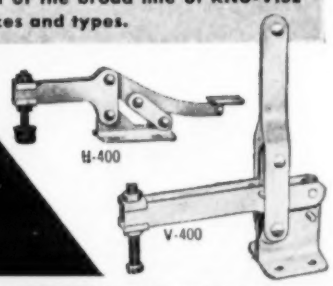
WROUGHT WASHER MANUFACTURING CO.
The World's Largest Producer of Washers
2256 S. BAY ST., MILWAUKEE 7, WIS.

A 7511-1/9

For more details circle NED-82 H4 on enclosed inquiry slip

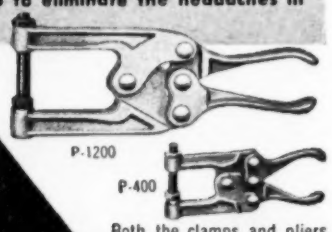
TOGGLE CLAMPS With added valuable feature — now offered to you as part of the broad line of KNU-VISE Toggle Clamps—in many sizes and types.

they're NON-CORROSIVE!
they're NON-MAGNETIC!
they're of STAINLESS STEEL!



TOGGLE PLIERS Here is the KNU-VISE answer to your need for a portable clamp to eliminate the headaches in spot welding aluminum.

they're NON-MAGNETIC!
they're NON-CORROSIVE!
they're of K-MONEL! (stronger than steel)



Both the clamps and pliers are also available in aluminum, on special request.

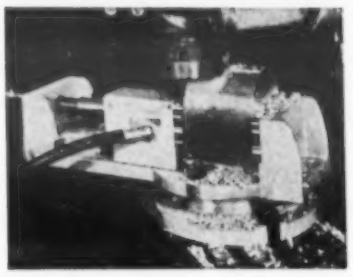
Sales offices in principal cities—Teletype DE 49

KNU-VISE PRODUCTS **LAPEER MFG. CO.**

3062 DAVISON ROAD • LAPEER, MICHIGAN
WESTERN DIVISION: 422 MAGNOLIA, GLENDALE, CALIF.
CANADIAN DIVISION: HIGGINSON ENGINEERING, HAMILTON, ONT.

For more details circle NED-83 H4 on enclosed inquiry slip

AUTOMATIC MACHINE VISE
air-hydraulic unit speeds clamping

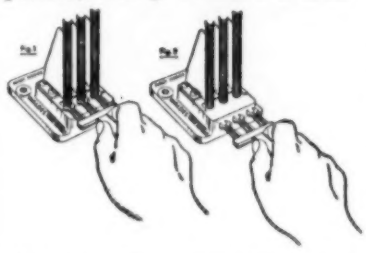


Designed for use on milling or other machines, WiltOmatic M-M vise combines pneumatic and hydraulic operation to give fast and powerful clamping action. Standard foot-pedal operated model generates 9000 lb force from a shop air line pressure of 90 psi, and can be used with line pressures from 20 to 140 psi. Unit illustrated has 6-in. jaws with a 6¼-in. opening. It is available with or without graduated swivel base. Crank handle motion provides rough jaw adjustment, and vise can be locked manually if desired. Made by **Wilton Tool Mfg. Co.**, Dept. NED, 925 Wrightwood Ave., Chicago 14, Ill.

For more details circle NED-84 H4 on enclosed inquiry slip

RETAINING RING DISPENSER
feeds three rings at once

Three Truarc crescent or E-shaped retaining rings are fed simultaneously with this triple-stack dispenser, using a three-headed applicator tool. Intended primarily for applications where more than one ring is mounted, device makes possible time and motion savings and speeds up work. Figure 1 shows how rings are gripped in the tool. Figure 2 shows applicator withdrawn from dispenser with rings ready for mounting. Made by **Waldes Kohinoor, Inc.**, Truarc Div., Dept. 057, 47-16 Austel Pl., Long Island City 1, N. Y.



For more details circle NED-85 H4 on enclosed inquiry slip

HOSE & FITTINGS KIT
assembles without clamps or sockets

Designed for making low and medium pressure fuel, air, water and oil lines, Socketless hose and fittings kit assembles without clamps and sockets. The required length of hose is merely pushed on to the socket. Pressure results from tightening of the grip. Fittings and hose are available in ¼ and ⅜-in. sizes in the kit, and up to ⅝-in. in bulk stocks. Made by **Aeroquip Corp.**, 303 S. East Ave., Jackson, Mich.

For more details circle NED-86 H4 on enclosed inquiry slip

UNUSUAL BARGAINS

SAVE TIME AND MONEY ON INSPECTIONS!

$225.00 Value
Only **$95** Postpaid

Wide, 3-Dimensional Field — Excellent Working Depth

STEREO MICROSCOPE
With Changeable Objectives

Fine, imported Binocular Microscope at a substantial saving. Used for inspections, examinations, counting, checking, etc. Erect image for easy interpretation. You get 2 pairs of eyepieces, 2 pairs of objectives (slide in and out on machined surfaces). Power range from 13X to 75X. Variable inter-ocular distance. Will accommodate standard eyepiece reticles. Rack and pinion variable tension focusing. Hardwood carrying case included. Accessories available. Recommended for lab, shop, factory or home use. We guarantee complete satisfaction or your money back.

Order Stock No. 70,036-AE, $95 ppd
Send Check or Money Order or order on open account.

VARIABLE POWER—20X—40X—60X

POCKET MICROSCOPE

A very handy "pocket" instrument with extra wide range of power for quick, easy spot-checking and inspection. It's light, sturdy. Milled ring spiral focusing. Grey enamel finish. Length 5⅜".
Stock No. 30,005-AE ..... **$3.95 Postpaid**
(Send check or M.O., or order on open acct.)

INFRA-RED FILTERS

5⅜" Dia. Use in front of your light source to screen out visible light—to yield only invisible infra red rays.
Stock # 60,033-AE ..... **$2.00 pstpd.**
(14,000 Units available at liberal discount to quantity users.)

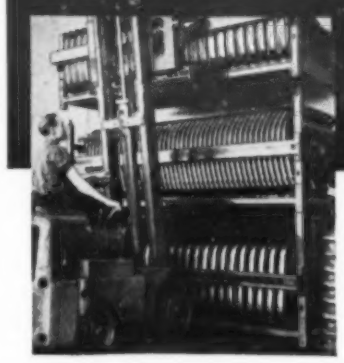
GET FREE CATALOG "AE"

If you haven't seen our big, FREE Catalog, you don't know what you're missing. Fantastic variety—never before have so many lenses, prisms, optical instruments, and components been offered from one source. Positively the greatest assembly of bargains in all America. Imported! War surplus! Telescopes! Microscopes! Hand Spectroscopes, Prisms, Lenses, Reticles, Mirrors and dozens of other hard-to-get optical items. Write for FREE CATALOG "AE".

EDMUND SCIENTIFIC CORP., Barrington, N. J.

For more details circle NED-87 H4 on enclosed inquiry slip

Almost every plant can use MHS WORK CARRIERS *Profitably*

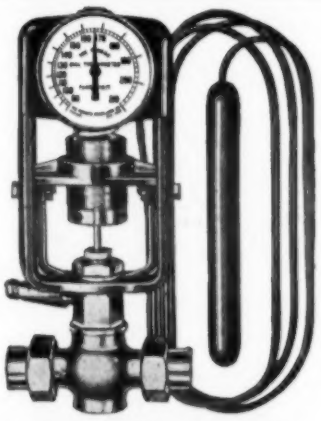


MHS Work Carriers have standard basic design, are adaptable to any shape or commodity.

MHS Work Carriers save time, labor and space. Use them to carry parts in processing, for storage (they nest and stack easily and securely), and in shipping (the carriers prevent damage in freight car or truck shipment). Take advantage of the simplicity, efficiency and economy MHS Work Carriers can bring to your plant. Write for Catalog R-2.

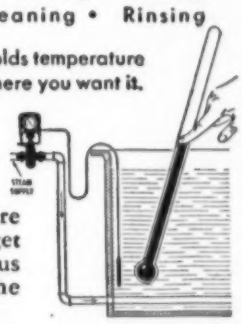
MECHANICAL HANDLING SYSTEMS INC. AND SUBSIDIARIES
4615 NANCY AVE., DETROIT 12, MICH.
Offices in Principal Cities
FACTORIES: Detroit, Mich. • Fairfield, Iowa • Albany, N.Y. • Windsor, Ont.

For more details circle NED-88 H4 on enclosed inquiry slip



NEW POWERS REGULATOR
For
Plating • Anodizing
Bonderizing • Pickling
Cleaning • Rinsing

Holds temperature where you want it.



Saves LABOR and Steam Helps Eliminate Costly Rejects

Powers No. 11-MF Regulators are self-operating. They will help you get the most effective use from various solutions by holding them at the right temperature automatically.

Plastic Covered Thermal Bulb and Tubing—is highly resistant to solutions in above processes. Prevents electrical shorts. No insulators required for the regulator.

Easy to Read 4" Dial Thermometer—indicates temperature of liquid being controlled and makes it easy to adjust regulator for different temperatures.

Bulletin 330 describes this simple, dependable control. May we send you a copy? (b31)

THE POWERS REGULATOR CO., SKOKIE, ILL.
Offices in over 50 Cities, see your Phone Book • Established in 1891

For more details circle NED-89 H4 on enclosed inquiry slip

Instant Heat Flow . . . Hands Completely Dry in 20 Seconds.

Proven More Sanitary Than Any Other Method of Hand Drying by Impartial Tests of U. S. Public Health Service

AND HERE'S WHAT HAPPENS WHEN YOU INSTALL NATIONAL HAND DRYERS:
- Recurring towel and laundry expense ended forever.
- Maintenance costs reduced to a minimum.
- No more plumbing expenditures for towel-clogged toilets.
- Absence of unsanitary towel litter.
- No used towel ends to pass along germs.
- Automatic 24-hour service . . . ends complaints about empty towel containers.
- Fastest drying action . . . relieves congestion in washrooms.
- No chapping of hands or face.
- Small compact design leaves washroom free from clutter.

END RECURRING TOWEL EXPENSE *Forever* by installing **NATIONAL HAND DRYERS!** *Never Again* **COSTLY WASHROOM MAINTENANCE . . . TOWEL LITTER**

PAID FOR THEMSELVES IN 6 MONTHS AT TOUREK MFG. CO. as reported in Factory Management and Maintenance

LEARN HOW YOU CAN SAVE 85¢ OUT OF EVERY MAINTENANCE DOLLAR. No obligation, of course.

Mail This Coupon Today

NATIONAL DRYER SALES CORP. Dept. 21
616 W. Adams St., Chicago 6, Illinois
Send me the facts. Cost comparison of towels vs. National Hand Dryers, Public Health Service Reports and descriptive literature.
Name_____Title_____
Company_____
Address_____
City_____Zone____State_____

For more details circle NED-90 H4 on enclosed inquiry slip

AEROQUIP SOCKETLESS FITTINGS
make hose line replacement amazingly easy

Make hose assemblies by just pushing Aeroquip 1525 hose on the socketless fitting. Hand pressure does it, and the fittings stay on for keeps, thanks to unique design features.

Aeroquip socketless fittings are the last word in one-piece simplicity. They are specially designed to work with Aeroquip 1525 triple-ply, cotton-reinforced hose.

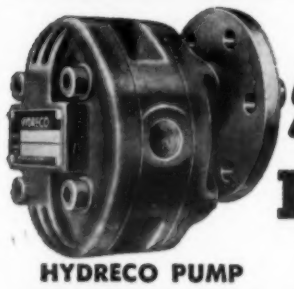
Sizes are 1/4, 3/8, 1/2 and 5/8" . . . ideal for fuel, air, water and oil lines. See your distributor, or write for information.

Aeroquip

AEROQUIP CORPORATION, JACKSON, MICHIGAN

FLEXIBLE HOSE LINES • DETACHABLE, REUSABLE FITTINGS • SELF-SEALING COUPLINGS • BREAKAWAY COUPLINGS • HYDRAULISCOPE
AEROQUIP PRODUCTS ARE FULLY PROTECTED BY PATENTS IN U.S.A. AND ABROAD

For more details circle NED-91 H4 on enclosed inquiry slip

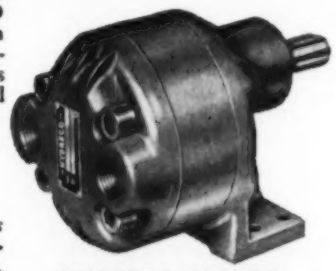


HYDRECO PUMP

Get the Facts on HYDRECO Oil Power!

WHAT KEEPS HYDRAULIC PUMPS AND MOTORS "ON THE JOB" DAY IN AND DAY OUT?...See Bulletin 139!

It takes more than pressures, speeds and capacities to keep equipment performing dependably, economically and when you want it. The invisible factors that do not appear in the specifications make the deciding difference in hydraulic controls. It is these PLUS factors that keep HYDRECO PUMPS and MOTORS on America's leading hydraulically-equipped Materials Handling, Earth Moving and Industrial Machinery.



HYDRECO MOTOR

Write –

Bulletin No. 139 has the facts you want to know about HYDRECO Pumps and Motors.

HYDRECO DIVISION
THE NEW YORK AIR BRAKE COMPANY
1108 EAST 222nd STREET • CLEVELAND 17 • OHIO

For more details circle NED-92 H4 on enclosed inquiry slip

A NEW FREE CATALOG ON FIBRE RECEPTACLES

- TRUCKS
- TRAYS
- TOTE BOXES
- BASKETS
- RECEPTACLES
- BARRELS
- ROVING CANS
- DOLLY TRUCKS
- CASTERS

Describes and illustrates a broad line of materials handling equipment practically all made of tough, smooth, light-weight, hard vulcanized fibre.

FIBRE SPECIALTY DIVISION
NATIONAL VULCANIZED FIBRE CO.
WILMINGTON 99, DELAWARE

FIBRE SPECIALTY DIVISION
NATIONAL VULCANIZED FIBRE CO.
WILMINGTON 99, DELAWARE

Please mail a copy of your Catalog 54.

NAME_____
COMPANY_____
STREET_____
CITY_____ ZONE_____ STATE_____

For more details circle NED-93 H4 on enclosed inquiry slip

AIR LINE LUBRICATORS
operate only while air flows

Made in 1/4, 3/8 and 1/2-in. sizes, type 2L lubricators inject an oil mist into compressed air lines to lubricate air cylinders, air tools and other pneumatic equipment. They have forged brass bodies, transparent plastic bowls and a micrometer oil metering adjustment with numbered dial. They operate only when air flows in either direction. Units will not flood line at shutdown. Made by **Generant Engineering Co.**, 256 S. Twentieth St., Newark 3, N. J.

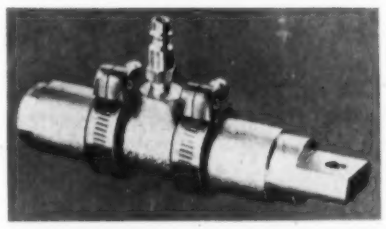
For more details circle NED-94 H4 on enclosed inquiry slip

ELECTRICAL TAPE GUN
speeds electrical harness wrapping

Plastic tape dispensed from the Scotch model E-2 "taping gun" effects reduction in time required for electrical harness wrapping. It handles 3/8-in. wide electrical tape and weighs less than 20 oz with a 36-yd roll of tape in its magazine. Tape protruding from end of gun is stuck to wires by the thumb, threaded around the bundle by its 10 1/2-in. curved tip and then cut with a touch of a thumb button. Made by **Minnesota Mining & Mfg. Co.**, Dept. NED, 900 Fauquier St., St. Paul 6, Minn.

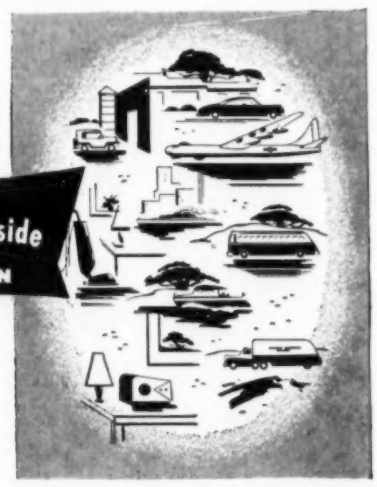
For more details circle NED-95 H4 on enclosed inquiry slip

PNEUMATIC VIBRATORS
small muffler-equipped units



Vibrating small bins, chutes, hoppers and screens to prevent arching, clogging or sticking of bulk materials can be achieved with line of 5/8 and 3/4-in. noiseless type pneumatic vibrators. Muffler-equipped unit is usable in close proximity to working personnel and in areas where low noise level is a major requirement. Up to 5000 strokes per minute are delivered by the unit which operates on 30 to 140 psi line pressure. Vibrator is 6 3/4 in. long and weighs 2 1/2 lb. Also available without muffler, unit is supplied with standard tong or special mountings. Made by **Burgess-Sterbentz Corp.**, Vibron Div., 3790-N W. 150th St., Cleveland 11, O.

For more details circle NED-96 H4 on enclosed inquiry slip



CASTINGS on the lighter side by WELLMAN

Chances are no matter what business you're in, there's a WELLMAN aluminum or magnesium casting somewhere in the picture.

For almost half a century, our four complete plants and experienced personnel have been producing castings on the lighter side to meet many requirements.

Let us hear from you, or write for our new catalog No. 53.

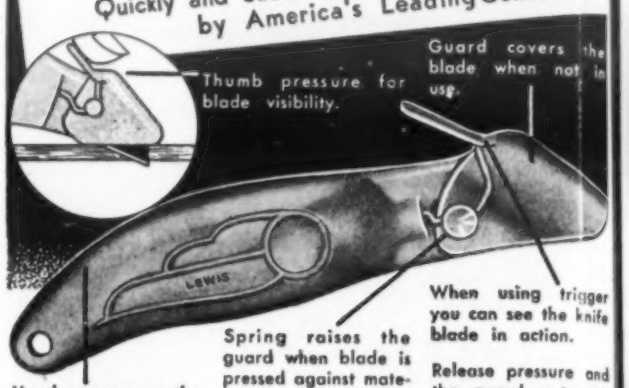
Well-Cast MAGNESIUM AND ALUMINUM CASTINGS
Well-Made WOOD AND METAL PATTERNS

THE WELLMAN BRONZE & ALUMINUM CO.
Dept. 15, 12800 Shaker Boulevard Cleveland 20, Ohio

For more details circle NED-97 H4 on enclosed inquiry slip

NEW! LEWIS AUTOMATIC TRIGGER ACTION SAFETY KNIFE

Quickly and Successfully Adopted for Use by America's Leading Concerns



No other cutting tool like it. Eliminates the hazards of exposed cutting blades. You must operate it to appreciate its swift and sharp cutting . . . always automatically ready for use. Trigger action gives full blade visibility with safety.

Retail Price $1.50

FLASH BOX OPENER CO., Inc.
52 W. Houston St. • New York 12, N. Y.

For more details circle NED-98 H4 on enclosed inquiry slip

OPW visi-flo

One Look to Know!

OPW VISI-FLO sight glass indicators are a trustworthy visible means of alerting you as to rate of flow, viscosity, color of liquids, clarity, and purity of product.

OPW VISI-FLO protects you against line stoppage, helps maintain uniformity, a high standard of product quality and an even continuity of production.

Write

Write for free Bulletin F-6 describing complete VISI-FLO line, from plain types to magnetic indicating types.

OPW CORPORATION
2729 Colerain Ave.
Cincinnati 25, Ohio

For more details circle NED-99 H4 on enclosed inquiry slip

NEW most rugged of them all!

KETT Panel Master HEAVY DUTY SAW

GIVES FULL 3/8" DEPTH OF CUT

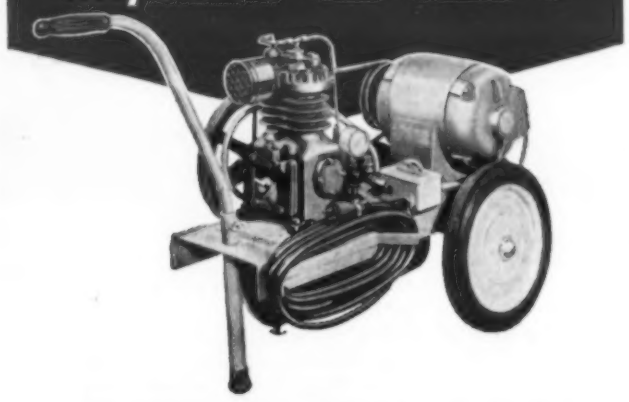
Never before so easy to cut and trim sheets and panels. *Never before* such savings in time and money. Start where you please . . . saw with ease! Two-inch diameter saw blades give full 3/8" depth of cut. Completely redesigned and powered with heavy duty, industrial type 110 volt, AC/DC portable 5/16" capacity electric drill motor, the Panel-Master cuts mild steel up to 12 gauge, aluminum, Fiberglas, plastics and plastic laminates. Ball bearings throughout. Leaves accurate milled finish edge.

Write for Catalog 20

THE KETT TOOL COMPANY
5 East Third St.
Cincinnati 2, Ohio

For more details circle NED-100 H4 on enclosed inquiry slip

Have Compressed Air Anywhere You Need It



New DeVilbiss Portable Air Compressors bring air to the job for spray painting, air tools, emergency service, or on-the-spot air supply. Available in ½ or 1 hp class, gas and electric models. Delivered pressure 60 or 100 pounds. Can even be carried in the trunk of your car. Write today for full details.

DEVILBISS — THE DEVILBISS COMPANY, Toledo, Ohio

Santa Clara, Calif. • Barrie, Ontario • London, England

For more details circle NED-101 H4 on enclosed inquiry slip

Now! An Interrupting rating in excess of 100,000 amperes *for every set of fuse clips*

. . . simply by installing FUSETRON *dual-element* FUSES

After years of development work, recent tests verified by the Electrical Testing Laboratories of New York indicate that an interrupting rating of 100,000 ampere for FUSETRON fuses is a conservative one.

On circuits set to deliver in excess of 100,000 ampere, 30 to 600 ampere, 250 and 600 volt FUSETRON fuses on every test cleared the circuit without belching flame or venting hot gases and with comparatively little noise.

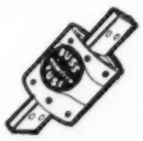
No Interference with Time-Lag

Remarkable results have been achieved. Interrupting capacity has been greatly increased while the time-lag characteristics of FUSETRON fuses has in no way been disturbed.

You get ALL THIS ADDED SAFETY without changing a panelboard or switch . . . PLUS the 10 Point Protection of FUSETRON dual-element FUSES.

For safe protection on loads above 600 and up to 5,000 ampere install BUSS Hi-Cap FUSES.

These fuses have unlimited interrupting capacity on circuits of 600 volts or less. Designed to give protection against dangerous overloads as well as excessively high fault current — yet their high speed operation on heavy shorts limits currents to safe values. When coordinated properly with FUSETRON fuses they will not open ahead of the fuse nearest to the fault.



ACTION THAT SAVES YOU MONEY

Delay may cost you far more in losses than replacing every fuse with a FUSETRON dual-element fuse on loads up to 600 amperes — and BUSS Hi-Cap Fuses on loads above that.

For blowing time charts and more information on FUSETRON dual-element Fuses and BUSS Hi-Cap Fuses write for Bulletins FIS and HCS.

BUSSMANN MFG. CO. (Div. McGraw Electric Co.)
University at Jefferson St. Louis 7, Mo.

For more details circle NED-102 H4 on enclosed inquiry slip

MAGNETIC SHEET SEPARATOR for use with lightweight stock

Placed next to a stack of light gage can lids, metal blanks, tin plate or other items, the model SF-01 magnetic sheet separator or fanner induces like polarity into them, causing them to repel each other. This action causes upper pieces in pile to be separated from one another. As each piece is taken from the top, others below it automatically move up. Unit retains its magnetic strength indefinitely. It is made in 6, 9 and 12-in. heights for fanning stock piles with maximum heights of 5, 8 and 11 in., respectively. Made by **Eriez Mfg. Co.**, 1325 E. Twelfth St., Erie, Pa.

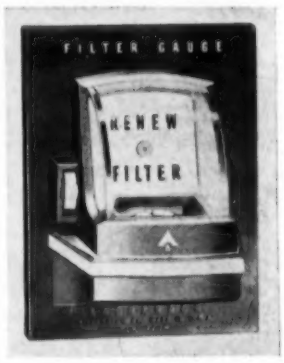
For more details circle NED-103 H4 on enclosed inquiry slip

STONE & CONCRETE BIT four sizes feature carbide inserts

Drilling expansion bolt holes for setting machinery, plug holes in stone and dimensional quarries, roof bolt holes in mines and pin holes in construction stone work are uses for the carbide inserted Whirli-Bit. Both ¾ and ⅞-in. bit sizes are made in 4 and 6-in. drilling lengths. Other lengths and sizes are available. Made by **Brunner & Lay, Inc.**, 9333 King St., Franklin Park, Ill.

For more details circle NED-104 H4 on enclosed inquiry slip

AIR FILTER GAGE shows when filter should be replaced



Designed for forced air heating, cooling and ventilating units, this gage determines the filter's resistance to passage of air and its capacity to clean air. It automatically indicates when filter is dirty and should be changed. Gage is activated by negative pressure in the blower chamber, which increases in proportion to the dirtiness of the filter. It is easily installed. Gage is adjusted to different filters and installations by a permanent magnet which is moved in relationship to the indicating vane by an adjusting screw and serves as a counterbalance for the negative pressure. Gage is made of plastic and has only two moving parts. Made by **Bacharach Industrial Instrument Co.**, 7303 Penn Ave., Pittsburgh 8, Pa.

For more details circle NED-105 H4 on enclosed inquiry slip

REMEMBER THE NAME . . . Rubyfluid

the easy-to-use Soldering Flux for neat, strong unions.

Use Rubyfluid Flux—liquid or paste—to get neat, strong unions speedily and easily. Rubyfluid is a special fast acting formula, wets out freely, is free from harmful and objectionable fumes, economical to use. Try it—send $1 for special offer—1 pt. liquid, ½ lb. paste flux and helpful booklet.

For Stainless Steel use *Ruby's Stainless Steel Flux*, perfected for that metal.

RUBY CHEMICAL CO.
72 S. McDowell Street Columbus 8, Ohio

Rubyfluid

For more details circle NED-106 H4 on enclosed inquiry slip

Chip Away... PAINT RUST SCALE

with AURAND CLEANING TOOLS
ELECTRIC or PNEUMATIC

Clean off accumulations of scale, paint, rust or any foreign matter from any hard surface with Aurand Cleaning Tools. Toothed cutting wheels, loose pinioned on rotating head chip away accumulations at high speed. Positive depth shoe prevents cutting into permanent surface and assures uniform cleaning of entire area.

Two sizes in electric or pneumatic models.

For full details, write Dept. 14

AURAND MFG. & EQUIP. CO.
2643 Colerain Avenue • CINCINNATI, OHIO

For more details circle NED-107 H4 on enclosed inquiry slip

KEYNOTES

"Believe me, a Key Graphite Paste joint wouldn't stick like that!"

The permanent, easy-breaking seal for oil, gasoline, high-pressure steam lines.

Write for FREE sample.

SEALS TIGHT... BREAKS RIGHT!
A Product of KEY COMPANY

2601 McCasland • East St. Louis, Illinois

For more details circle NED-108 H4 on enclosed inquiry slip

to Measure SPEED *and Stop* MOTION from 60 to 100,000 RPM!

THOUSANDS OF G-R Type 631-BL STROBOTACs are in use in Industry in the design, manufacture, maintenance, service and sales of all types of machinery. The STROBOTAC will 'stop' motion and accurately measure speed, or show any machine or part operating in s-l-o-w motion . . . as slow as a fraction of an rpm if desired . . so that any misfits, irregularities, worn parts, slippage or lack of correct meshing of even the fastest moving part can be seen.

STROBOTAC®

Moderately priced at $150, the STROBOTAC may be the answer to your problem Let us tell you more about it.

Write for the STROBOSCOPE Bulletin

GENERAL RADIO Company 275 Massachusetts Ave. Cambridge 39, Mass.
90 West St. NEW YORK 6 8055 13th St., Silver Spring, Md. WASHINGTON, D.C.
920 South Michigan Ave. CHICAGO 5 1000 North Seward St. LOS ANGELES 38

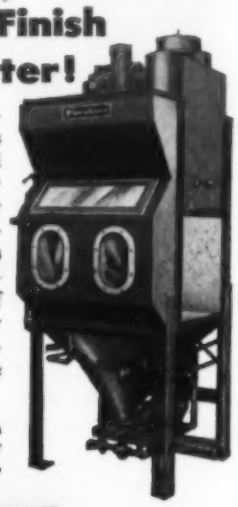
For more details circle NED-109 H4 on enclosed inquiry slip

BEFORE

Mold cleaned and finished by Pangborn Hydro-Finish in minutes!

AFTER

Pangborn Hydro-Finish cleans better—faster!



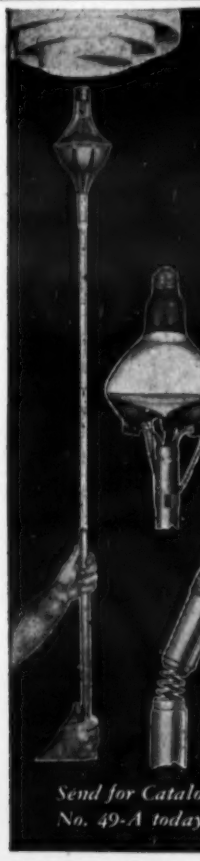
Molds, dies, tools—Pangborn Hydro-Finish cleans them quickly, leaves them bright and ready to use! Hand cleaning and polishing is practically eliminated! And production is further speeded up because Pangborn Hydro-Finish, operated by one man, removes scale and discoloration in minutes instead of hours. In addition, the use of fine mesh abrasives suspended in water gives you a precision job . . . holds tolerances to .0001" . . . protects delicate equipment.

GET COMPLETE FACTS on Hydro-Finish and how it can save *you* money! Write for Bulletin 1400A to: PANGBORN CORPORATION, 2400 Pangborn Blvd., Hagerstown, Md.

Pangborn PANGBORN'S 50th ANNIVERSARY 1904-1954

BLAST CLEANS CHEAPER with the right equipment for every job

For more details circle NED-110 H4 on enclosed inquiry slip



The *safe way* to change lamp bulbs *is with* McGILL® adaptable LAMP CHANGERS

McGill Lamp Changers eliminate accident hazards in changing lamp bulbs out of arm's reach. Heights of 30 feet are easily reached by adding multiple 5 ft. steel pole sections. Each is insulated. Heads are available for almost any size and shape of lamp.

Send for Catalog No. 49-A today!

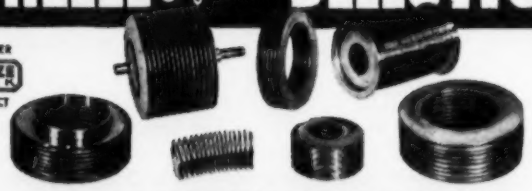
McGILL® electrical specialties

McGILL MANUFACTURING CO., INC. 151 N. CAMPBELL ST. VALPARAISO, INDIANA

For more details circle NED-111 H4 on enclosed inquiry slip

BREEZE Job-Engineered **BELLOWS**

ANOTHER BREEZE MARK PRODUCT



...Give LASTING PROTECTION Where Ordinary Bellows Fail

Breeze welded diaphragm bellows meet the operating life cycle of any equipment in which they are used *because every Breeze bellows design is individually engineered and built for the job.*

Breeze has no "stock bellows," but if you have a vibration problem in ducts, large or small, or want permanently sealed valve enclosures in any type of piping system, or need bellows for torque transmission or other uses, Breeze experience can quickly provide the answer . . . and production can meet your requirements.

A Breeze bellows is dependable because each diaphragm is designed to work well within its elastic limit. This is accomplished by thorough analysis of each application and careful design of the bellows to withstand all requirements. "Job engineering" each individual type eliminates makeshifts, assures efficient performance.

Breeze bellows are made in stainless steel, inconel, monel, nickel, steel, or other weldable alloys.

Feel free to consult us without obligation on your existing bellows requirements, or any other project where reliable welded diaphragm type bellows might solve a design problem.

BREEZE CORPORATIONS, INC. 700 Liberty Ave., Union, N. J.

OTHER BREEZE PRODUCTS: ACTUATORS · RADIO SHIELDING · AERO-SEAL HOSE CLAMPS

For more details circle NED-112 H4 on enclosed inquiry slip

THREE-BLADE HOLE CUTTERS cover 1 to 6-in. diameters

Improved Hole-Maker three-bladed hole cutters are available in five sizes covering hole diameters from 1 to 6 in. Blades have 1-in. adjustment range. Cutters, which can be equipped with interchangeable pilot or pilot drill, can be used on steel, cast iron, aluminum and other metals. They will cut thicknesses ranging from thin sheet to heavy plate. Standard square high speed steel cutter blades are securely clamped in machined slots by two socket-head set screws. Straight or Morse taper shanks are standard, and other tapers and special pilot drills are available. Made by **Robert H. Clark Co.**, Dept. 250, 9330 Santa Monica Blvd., Beverly Hills, Calif.

For more details circle NED-113 H4 on enclosed inquiry slip

HYDRAULIC TRANSMISSION rated at 50 hp continuous duty

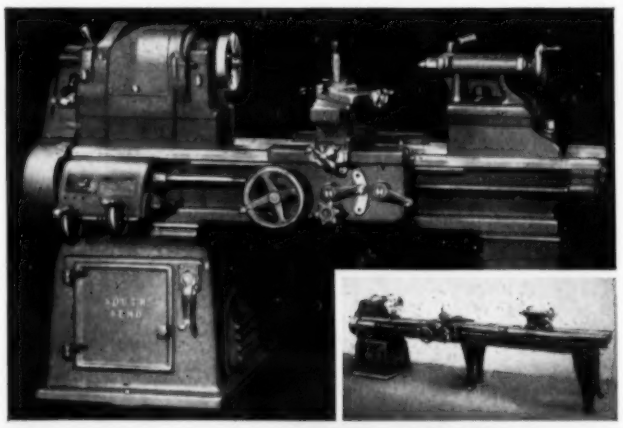
Any speed from 0 to 1150 rpm in either direction can be obtained from the size 5 variable speed hydraulic transmission. It consists of a 112-gpm variable and reversible delivery axial piston pump and a constant displacement axial piston motor. Designed for operating pressures to 3000 psi, unit is suitable for winches, hoists, wire drawing drives, heavy machinery, draw benches and oil well equipment. It is an assembled and packaged unit, with valves, controls, auxiliary pump, relief and replenishing valves built in. Pump can be operated at a distance from hydraulic motor. Transmission is rated at 50 hp continuous duty and 200 hp for overloads. Creeping speeds are accurately controlled under constant load down to 1 rpm. Made by **Vickers Inc.**, Waterbury Tool Div., 160 E. Aurora St., Waterbury 20, Conn.

For more details circle NED-114 H4 on enclosed inquiry slip

Electronic Computers

Servomechanisms, Inc.—12-page illustrated bulletin "Computers, Components, Control Systems" includes data on such items as mach computers, master air data computers, accelerometers and positioning mechanisms. Engineering and design service is covered.

For more details circle NED-115 H4 on enclosed inquiry slip



24" Swing for BIG Jobs

A general purpose precision lathe for large diameter jobs, such as boring jig plates, turning and boring wheels, machining pulleys, turning brake drums, and similar work. Although this lathe has ample capacity for large awkward jobs, it is not too heavy and cumbersome for efficient operation on small parts. Swings 25⅛" over bed, 18¾" over carriage, 16 spindle speeds 15 to 900 r.p.m., between centers up to 102". Prices from $2437.00 depending on bed length and equipment. Write for catalog.

SOUTH BEND LATHE SOUTH BEND 22, INDIANA *Building Better Tools Since 1906*

For more details circle NED-116 H4 on enclosed inquiry slip

POR-ROK (POUR ROCK) Fast Setting Cement

PERMANENTLY ANCHORS BOLTS IN CONCRETE WITHIN **30 MINUTES!**

Securely fastening machinery, hand rails, seats, fixtures or any type of equipment to concrete by means of anchor bolts can now be done quickly, easily and safely with Por-Rok Quick Setting Cement.

Por-Rok successfully replaces lead and sulphur, and costs considerably less. Applied cold, there is no heating hazard. Simply mix Por-Rok powder with water and pour around bolt. Within 30 minutes the cement sets hard and the bolt is anchored permanently.

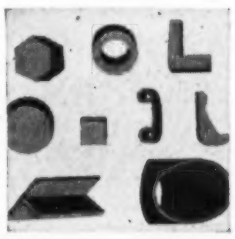
Por-Rok also makes quick, lasting repairs to holes and breaks in concrete floors with little or no interruption to normal traffic. It is self-bonding, self-leveling, oil-resistant, does not shrink. Compression strength of 4500 lbs. p.s.i. in one hour GUARANTEED.—

For complete information—without obligation—write

THE HALLEMITE MFG. CO. 2452 WEST 25th ST. • CLEVELAND 13, OHIO SINCE 1917

For more details circle NED-117 H4 on enclosed inquiry slip

THE CINCINNATI Wet Abrasive Cut-Off Machine



Cut Down ON **CUT-OFF TIME!**

Cut any metal, solids or tubing fast and accurately! Capacity up to 2-¼" in solids, 3-½" in tubing. Straight or angle cuts up to 45°. And look at these speeds: 2" bar stock in 15 seconds . . . 2" tubing, 3/32" wall, in 10 seconds . . . 2" angle iron, ⅛" thick, 45° angle, in eight seconds. Special features include Cincinnati's exclusive water nozzle, insuring proper coolant flow for longer wheel life; and foot-operated vise, freeing operator's hands for faster production. Write today for Bulletin 54-Y.D.

TRADE *The Cincinnati* MARK

THE CINCINNATI ELECTRICAL TOOL CO. Division of THE R. K. LeBLOND MACHINE TOOL CO.

2698 Madison Road, Cincinnati 8, Ohio

For more details circle NED-118 H4 on enclosed inquiry slip

DE•STA•CO HELPS PUT SKYLIGHT IN THIS CAR

Eleven Model 210 TU De•Sta•Co Toggle

Photos courtesy Ford Motor Company, Detroit Macoid Company.

Clamps position and hold hot plastic sheets during the vacuum molding process used to produce transparent car roofs for Ford and Mercury automobiles. This fixture requires positive holding pressures during the 10 minute draw of Plexiglass sheet heated to 300° F. Two-second engagement and release of the De•Sta•Co Toggle Clamps speeds production, assures accuracy.

De•Sta•Co Toggle Clamps are available in over 45 models, with positive holding pressures up to 4000 pounds, for any work holding application.

Write for free catalog today.

DE•STA•CO DETROIT STAMPING CO. 360 MIDLAND AVE. • DETROIT 3, MICH.

For more details circle NED-119 H4 on enclosed inquiry slip

PICK 'EM UP
Faster..Easier

DOWNS SAFETY GRABS
...GRIP ANYTHING!

Yes we said anything—odd shapes, round, oblong, square or even loose objects such as bags or bundles. Best of all you save money on your handling problems while protecting employees.

Downs Safety Grabs are engineered to provide a load safety factor greater than rated capacity plus a Bulldog grip that won't let go until you release the load. There's a Downs hook, grip, tong or sling to fit every handling problem. Write for free illustrated catalog 200 today!

DOWNS CRANE & HOIST CO.
MECHANICAL ENGINEERS
540 W. VERNON AVENUE • LOS ANGELES 37, CALIF.

For more details circle NED-120 H4 on enclosed inquiry slip

WHEN THREADS HAVE TO BE Right...

Your gages do too!

Detroit thread plug and thread ring gages have long been noted for their high degree of accuracy and long life.

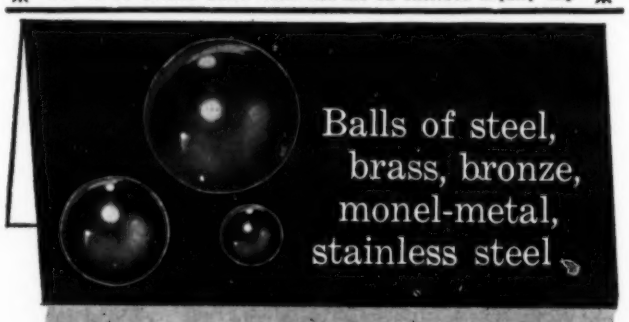
Now, in addition to accuracy and quality, Detroit Tap and Tool can make prompt delivery on Standard American National thread gages as well as on gages for Unified threads, American Standard pipe threads, Aeronautical pipe threads or Dryseal pipe threads.

Many special size thread ring and thread plug gages are also carried in stock for immediate shipment.

See your local Detroit Tap and Tool representative today. Ask for our complete Catalog-Price List (SG-53) covering standard thread gages.

DETROIT TAP & TOOL CO.
8615 E. EIGHT MILE RD. BASELINE, MICHIGAN

For more details circle NED-121 H4 on enclosed inquiry slip



Balls of steel, brass, bronze, monel-metal, stainless steel

BALLS
HOOVER
BALL BEARINGS

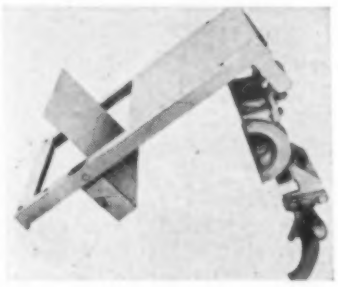
America's only ball bearings with Honed Raceways

The Aristocrat of Bearings

HOOVER BALL and BEARING COMPANY
Ann Arbor, Michigan

For more details circle NED-122 H4 on enclosed inquiry slip

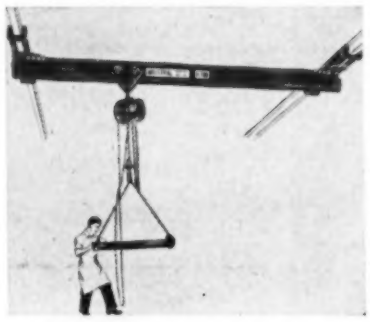
SPOUT MAGNETS
remove tramp iron



Need for hand cleaning is eliminated by auto-clean spout magnets which automatically remove tramp iron from flow of material. Device is held in operating position by magnetic force. When separator is opened, trap gate automatically blocks the chute. In this position, tramp iron cannot fall into product. Magnetic components shown in photo swing away from chute allowing trapped iron to fall free. Unit is available in various sizes and dimensions. Made by **Stearns Magnetic, Inc.**, 653 S. 28th St., Milwaukee 46, Wis.

For more details circle NED-123 H4 on enclosed inquiry slip

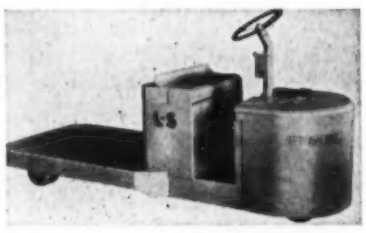
PUSH TYPE CRANES
light and heavy duty overhead models



Hand operated or electric hoists are usable on units in expanded line of push type cranes, available in spans from 8 to 30 ft. Five light duty underhung models have capacities from 500 to 4000 lb, while seven heavy duty underhung and seven heavy duty top running models have capacities from 1000 to 8000 lb. Underhung heavy duty cranes are equipped with forged steel wheels with removable head axles. Made by **Industrial Crane & Hoist Corp.**, 327 N. Ada St., Chicago 7, Ill.

For more details circle NED-124 H4 on enclosed inquiry slip

ELECTRIC TRUCK
carries up to 1 ton of freight



General purpose model J battery-powered pick-up truck will carry up to 1 ton of freight at speeds of from 5 to 6 mph. It can be equipped with removable air-cushion seats for plant tours. Deck area is 15 sq ft and deck height 9½ in. Truck is 107½ in. long, 40 in. wide and has a turning radius of 77½ in. Made by **Lewis-Shephard Products, Inc.**, Dept. R-50, Watertown 72, Mass.

For more details circle NED-125 H4 on enclosed inquiry slip

NEVER BEFORE! A LOW COST, VERSATILE CONVEYOR - LIKE THIS!

WHAT'S so different? Three 10 ft. lengths of A-F *Live Rail* were cut to length and easily adapted to this special installation to serve as "anti-friction tables" . . . A-F *Live Rails* — straight or curved are available in sections or "singles" 5 ft. and 10 ft. lengths; a complete line of stands and accessories for portable use or permanent installation; may be spaced to any width or wheel pattern. Think of the savings! Write for FREE Catalog today.

A-F LIVE RAIL
Pre-Engineered Products Division
THE ALVEY-FERGUSON COMPANY
OF CINCINNATI
37 Disney Street – Cincinnati 9, Ohio
WEST COAST – P. O. Box 244 – AZUSA, CALIFORNIA

For more details circle NED-126 H4 on enclosed inquiry slip

5414

HOW DO YOU THREAD A PRECISION HOLE?

If your operation involves precision threading of precision holes, meet the

HAMILTON SMALL HOLE SUPER SENSITIVE PRECISION TAPPING MACHINE

Handles the smallest and finest tap to 10-32 inclusive.

Spindle idles in reverse, changes rotation instantly as pressure is applied to tap, reverses instantly as pressure is released.

Taps to the very bottom of blind holes without risk of tap breakage.

WANT COMPLETE FACTS?

Write for FREE Hamilton Bulletin No. 5414. Address The Hamilton Tool Company, 901 Hanover Street, Hamilton, Ohio.

IT'S A Hamilton Tool
USE IT WITH CONFIDENCE

For more details circle NED-127 H4 on enclosed inquiry slip

High Efficiency Deaerator at LOW COST

Cochrane UNI-PAC* DEAERATOR

for small and medium size plants

- Guaranteed to deliver zero oxygen water.
- Factory assembled.
- Completely self-contained.
- Easy to install.
- Minimum piping required.
- Wide range of heater sections, storage tanks and accessories to meet any plant requirement.

Now, you can have *zero oxygen* feedwater for your boilers at a cost within reach of the smallest plant!

The Cochrane UNI-PAC DEAERATOR delivers water heated to the saturation temperature of the steam used with a guaranteed zero oxygen content as determined by accepted tests (less than 7 parts per billion).

The UNI-PAC DEAERATOR is designed for either right or left hand installation, and in a wide range of outlet and storage capacities.

For complete details of the UNI-PAC DEAERATOR, *use the coupon below.*

*Trademark

Cochrane CORPORATION
3143 N. 17TH STREET, PHILADELPHIA 32, PENNSYLVANIA

C100.5

COCHRANE CORPORATION
3143 N. 17th St., Philadelphia 32, Pa.

Please send me a copy of Publication 4643 on the Cochrane UNI-PAC DEAERATOR.

NAME_____ TITLE_____
COMPANY_____
ADDRESS_____
CITY_____ STATE_____

For more details circle NED-128 H4 on enclosed inquiry slip

this heavy OUTDATED steel bridge plate...

was the most expensive equipment this firm had on its dock!

This heavy steel plate has cost the company many times its original price. It has caused wasted man hours, accidents, loading bottlenecks, and equipment-load damage, etc.

But not any longer! It has been replaced with a light, strong Magliner Dock Board. Magliners are designed to meet difficult and out-of-the-ordinary conditions, eliminate costly delays and bottlenecks—and make loading costs go down! Magliner Dock Boards can lower your loading costs too! It will pay you to get the facts.

MagLiner MAGNESIUM DOCK BOARDS

WRITE TODAY for Bulletin DB-204

MAGLINE INC. • P. O. BOX 396 • PINCONNING, MICHIGAN

▲ For more details circle NED-129 H4 on enclosed inquiry slip ▲

HOW TO USE DRY TYPE TRANSFORMERS PROFITABLY IN YOUR PLANT

Planning the electrical system of your plant with Acme Electric dry type transformers can save you money, material and time. How to eliminate double wiring, provide 3-wire secondary circuits, insulate circuits or balance voltage are only a few of the many ways you can use Acme Electric dry type transformers. Write for the folder DT 195 containing ideas and wiring diagrams. Acme Electric transformers are available in single phase sizes from 1/10 thru 500 KVA; three phase from 3 thru 750 KVA.

ACME ELECTRIC CORPORATION
MAIN PLANT: 308 WATER STREET • CUBA, N. Y.
West Coast Engineering Laboratories: 1375 W. Jefferson Blvd., Los Angeles, Cal.
In Canada: Acme Electric Corp. Ltd. • 50 North Line Rd. • Toronto, Ont.

Acme ACME Electric TRANSFORMERS

▲ For more details circle NED-130 H4 on enclosed inquiry slip ▲

POSITIVE TOOL STEEL IDENTIFICATION

WITH THIS NEW 12-Color Chart!

Now . . . to help you eliminate costly tool steel mix-ups, Carpenter Matched Tool & Die Steel bars are painted FULL LENGTH with distinctive colors! This *practical* marking system, along with this new Wall Chart printed in colors that match the completely-painted bars, enables you to . . .

QUICKLY IDENTIFY TOOL STEELS!
REDUCE YOUR OWN MARKING COSTS!
AVOID COSTLY STOCK MIX-UPS!
SIMPLIFY INVENTORY-TAKING!

Tool Steel Selector and Identification Wall Chart — 21" x 30"—printed in *12 colors!* To cash-in on this new color-marking system, send for your Wall Chart, *now.* Just mail the coupon.

THE CARPENTER STEEL COMPANY
118 WEST BERN STREET • READING, PA.
Please send me the free Tool Steel Selector and Identification Wall Chart.

NAME ..... TITLE .....
COMPANY .....
ADDRESS .....
CITY ..... ZONE ..... STATE .....
(PLEASE PRINT)

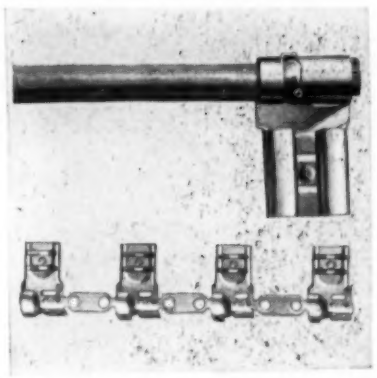
▲ For more details circle NED-131 H4 on enclosed inquiry slip ▲

BRACKET SEATS attach to bench, table or machine

Seat adjustments of 5, 8 or 11 in. are available in line of seats on swinging brackets for attachment to machine, bench, table or wall. Types offered are round steel, round wood, formed plywood, saddle-shaped solid hardwood and upholstered, with or without two-way adjustable backrest. To adjust, seat is lifted to desired height and it locks in position. Brackets are steel tubing, finished in olive green or machine tool gray, with special finishes or chrome plate available. Seat pads or 2-in. thick cushions are also offered. Made by **Ajusto Equipment Co.,** Dept. D, 2144 Madison Ave., Toledo 2, O.

▲ For more details circle NED-132 H4 on enclosed inquiry slip ▲

PUSH-ON ELECTRIC CONNECTORS flag design for right angle joint



Faston push-on connectors are now available with flag design for fast right angle connection. Connectors have triple spring action and wide wiping contact. They push onto mating tab receptacle to make connection. The connector will accommodate all insulations normally used in automotive and appliance wiring in sizes No. 18 through 12 AWG. Connectors are furnished in strip form wound on reels for use on A-MP automatic machines which apply connectors to wire at speeds up to 4,000 per hour. Terminal can be crimped on center strip. Made by **Aircraft-Marine Products, Inc.,** 2100 Paxton St., Harrisburg, Pa.

▲ For more details circle NED-133 H4 on enclosed inquiry slip ▲

High Speed Grinding Attachments

F & D Machine & Tool Works—Liberty high speed grinding attachments are subject of illustrated loose-leaf folder. Units are available for attachment to standard popular surface grinders and are made in both horizontal and vertical styles. They are belt-driven from the grinder and are available in various models developing up to 40,000 rpm. Specifications and features are given.

▲ For more details circle NED-134 H4 on enclosed inquiry slip ▲

CHOOSE Sta-Warm

electrically heated
TANKS • KETTLES • POTS
for melting and dispensing

PITCH TAR POTTING COMPOUNDS GLUE RESINS COMPOUNDS WAXES SYNTHETIC ADHESIVES THERMO-PLASTICS

You'll find Sta-Warm equipment offers a wide variety of capacities and specifications to meet your production or laboratory needs.

Write for catalogs, or outline your problem to us today and ask for recommendations. No obligation.

Sta-Warm ELECTRIC CO.
130 N. CHESTNUT ST., RAVENNA, OHIO

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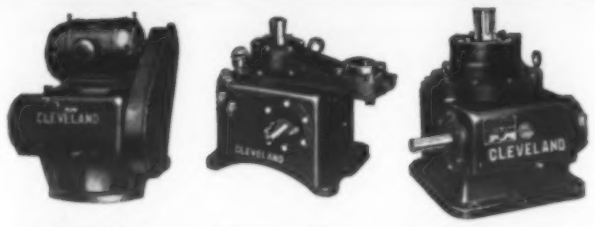


Agitator drive Conveyor drive Cooling tower drive

You can solve special problems with special CLEVELAND drives

LEFT: Available space dictated design of this Cleveland worm gear agitator drive for a chemical company. Top gear shaft clamping plate serves as adjustable base for motor.

CENTER: Worm gear unit for overhead conveyor drive. Standard housing is augmented by an overarm to support and maintain alignment in an auxiliary set of spur gears.

RIGHT: Special adaptation of Type NU vertical unit designed for "dry" cooling tower operation. "High hat" construction provides additional bearing load capacity as well as fan blade clearance above motor.

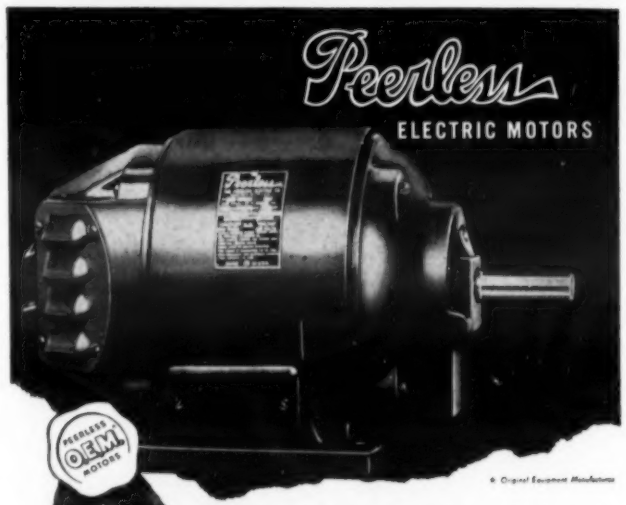
Write for Catalog 400 for data on special units as well as on the complete Cleveland line. The Cleveland Worm and Gear Company, 3283 East 80th St., Cleveland 4, Ohio.

CLEVELAND WORM GEAR Speed Reducers

Affiliate: The Farval Corporation, Centralized Systems of Lubrication

▲ For more details circle NED-136 H4 on enclosed inquiry slip ▲

Peerless ELECTRIC MOTORS



PEERLESS OEM MOTORS

It's like having your own motor department

We would like to share our facilities and knowledge with you. If you're trying to fit a standard motor to a custom job — if you want special characteristics in your motors . . . then you want Peerless Electric. It's like having your own motor department.

Peerless engineers work with your engineers to give your motors the electrical and mechanical qualities you require. And, because of our size, we can make minor changes later without trouble.

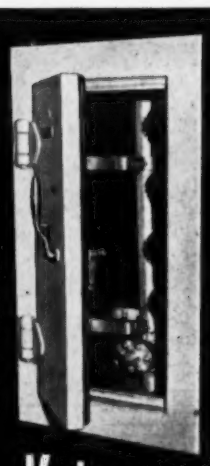
To get started, call Peerless . . . ask for me. I'll have you talk to the man who can help you most. You can have custom motors at a competitive price — PEERLESS GOLD SEAL MOTORS.

Ralph Kimble
President

THE PEERLESS ELECTRIC CO. • W. MARKET ST., WARREN, OHIO
MOTORS FANS BLOWERS

▲ For more details circle NED-137 H4 on enclosed inquiry slip ▲

Weathertight
Watertight
Insulated
Flush-Mounted
ACCESS DOORS
by
Overbeke-Kain



3020-OK

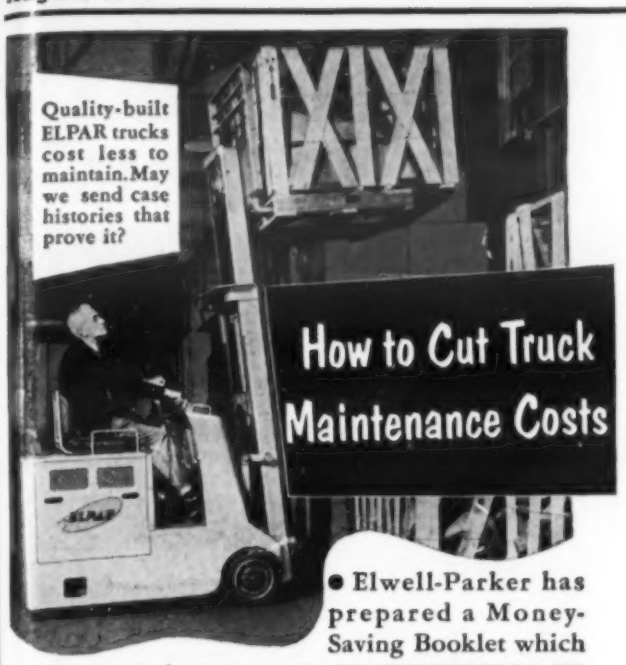
Complete protection for equipment is assured by OVERBEKE-KAIN Access Doors. Special neoprene rubber gasketing provides positive seal . . . articulated hinge permits complete dogging on hinge side. Standard construction is heavy-gauge steel plate . . . stainless steel, aluminum or other non-corrosive materials available also. Doors can be furnished in sizes to meet all needs.

the Overbeke-Kain company

Write for Bulletin No. 784 for complete information.

MARINE PRODUCTS DIVISION
20979 Aurora Rd. • Bedford, Ohio

▲ For more details circle NED-138 H4 on enclosed inquiry slip ▲



● Elwell-Parker has prepared a Money-Saving Booklet which shows you how to set up a PREVENTIVE MAINTENANCE PROGRAM. Our new 8-page folder, describing the program in detail, is available free and without obligation. Samples of truck maintenance forms, that you may copy, are included. *Write Now for Your Copy.*

THE ELWELL-PARKER ELECTRIC COMPANY
4095 St. Clair Avenue Cleveland 3, Ohio

For more details circle NED-139 H4 on enclosed inquiry slip

Outside equipment service and repair is easier and faster with the new Quincy Model HT-325 Compressor. The compact unit can be mounted in a pick-up truck . . . supplies compressed air for cleaning, painting, lubrication and operating pneumatic tools.

Easy starting is accomplished by a pull rope or electric starter powered by the truck battery. Tank pressure is automatically maintained at from 165 to 175 p.s.i. A tank manifold provides lower pressure when required.

Quincy makes compressors in 21 models from 1 to 90 C.F.M. Write Dept. NE-37 for Form 300B on industrial compressors.

Makers of the World's Finest Air Compressors

Quincy COMPRESSORS
QUINCY COMPRESSOR CO.
QUINCY, ILLINOIS
Branch Offices: New York • Philadelphia • Atlanta • Detroit • Chicago • St. Louis • Dallas • San Francisco

For more details circle NED-140 H4 on enclosed inquiry slip

HANDLING BULK MATERIALS?

"TAKE IT UP A FLO→TUBE"®

CANTON STOKERS

The spiral conveyor of steady, dependable service. Sturdy cast iron trough bolts together in 3 ft. sections, capped with steel plates for easy removal if ever necessary. Built to take the abuse of coal, yet with tolerances just right to handle materials from grain size to lump.

To fill 3 or more hoppers use gate-valves in Flo-Tube horizontally. Below, filling 2 hoppers with "Y" chute.

Hopper level maintained by 'off-on' automatic switches.

Exposed end for pick-up

CANTON STOKER CORP.
SPECIALISTS IN AUTOMATIC COAL FIRING, HANDLING AND CONTROL EQUIPMENT
102 ANDREW PLACE S. W. • CANTON, OHIO

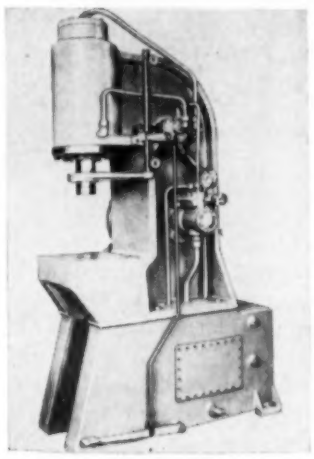
For more details circle NED-141 H4 on enclosed inquiry slip

ULTRASONIC CLEANER
uses detergent or cleaning solution

Transmission of ultrasonic waves through either water soluble detergents or cleaning solutions provides the cleaning action for processing parts in the Bendix ultrasonic cleaner. Low frequency magnetostrictive transducer causes the solution to cavitate or "cold-boil" with countless minute bubbles which implode to loosen particles of grease, grit and other foreign matter. Cleaner is made in diameters of 4, 7½ and 12 in., each with a depth equal to its diameter. Made by **Bendix Aviation Corp.**, Pioneer-Central Div., 2744 Hickory Grove Rd., Davenport, Iowa.

For more details circle NED-142 H4 on enclosed inquiry slip

HYDRAULIC PRESSES
improved models rated at 15 tons



H-15 series Greenerd hydraulic presses supersede former H-60 line. Although having practically the same dimensions, they are more strongly built and conform more fully to JIC standards. Standard specifications call for 16-in. daylight over table and 15-in. ram travel, though 21 or 30-in. daylight can be furnished. Ram pressure is rated at 15 tons in all models. Ram travel under full load varies from 34 to 205 ipm depending on motor, which is available in 3 to 20-hp sizes. Standard machine is equipped with 3¾-in. cored hole in work table central with ram and can be equipped with cored slot. It is foot pedal controlled and has direct-reading hydraulic pressure gage. A variety of optional accessories is available. Made by **Greenerd Arbor Press Co.**, Lock Box X-415, Nashua, N. H.

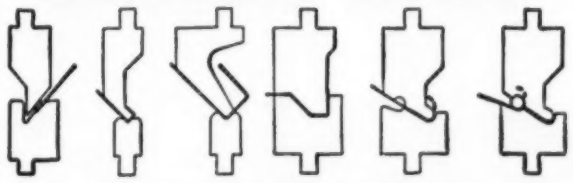
For more details circle NED-143 H4 on enclosed inquiry slip

Flow Meters

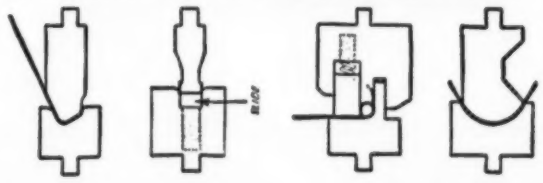
Minneapolis-Honeywell Regulator Co., Industrial Div.—Indicating, recording, integrating and controlling flow meters are subject of 56-page illustrated catalog 2320. Instruments of evenly graduated and square root types, as well as area meters and differential converters are discussed. Data on flow approximations and installation are included.

For more details circle NED-144 H4 on enclosed inquiry slip

famous "34 year"
BRAKE DIES



ANY SPECIAL SIZE OR SHAPE CAN BE DEVELOPED BY OUR EXPERIENCED ENGINEERS



Made by the makers of SEMCO PRESS BRAKES (6ft.—8ft.)

Write for new literature showing 26 Standard Brake Die styles and 2 sizes of low priced Press Brakes.

SEMCO
SERVICE MACHINE CO., INC.
202 MILLER STREET ELIZABETH 4, N. J.

For more details circle NED-145 H4 on enclosed inquiry slip

5417

This **GEAR HOBBER delivers *EXTRA* PRECISION**

The Hamilton Precision Gear Hobber generates small, fine pitch gears to 6" O.D. of the gear blank. Alignment and trueness of all spindles held to less than .0002".

WHAT'S MORE

Independent selection of speed, feed, and indexing speeds machine set-up and provides a means for matching cutting speed and work feed to the material being machined.

WANT ALL THE FACTS?

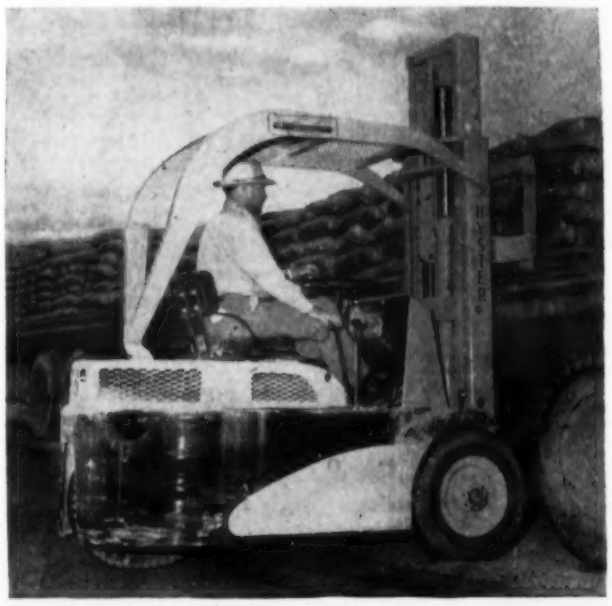
Write for Hamilton Bulletin No. 5417. Address The Hamilton Tool Company, 901 Hanover Street, Hamilton, Ohio.

IT'S A *Hamilton Tool*
USE IT WITH CONFIDENCE

For more details circle NED-146 H4 on enclosed inquiry slip

B.F.Goodrich

FREE TW ANALYSIS eliminates tire waste, cuts costs 20 to 50%



The B. F. Goodrich Tire and Wheel Analysis Plan attacks excessive tire costs by uncovering the *reasons* behind tire waste. What causes premature tire failure? Rapid tread wear? Cutting and chipping? The TW Analysis answers all of these questions and many more. This free analysis has cut tire costs 20 to 50% for hundreds of industrial tire users across the country. It can do the same for you!

Contact your BFG retailer or mail the coupon below. Without cost or obligation, a trained B. F. Goodrich man will study your materials handling operations. He will tell you what type and size tire, what tread design and compound will serve you best. He will recommend ways to improve your tire maintenance program. The advice you receive will be unbiased, for B. F. Goodrich makes a *complete* line of industrial tires—solids, pneumatics and semi-pneumatics.

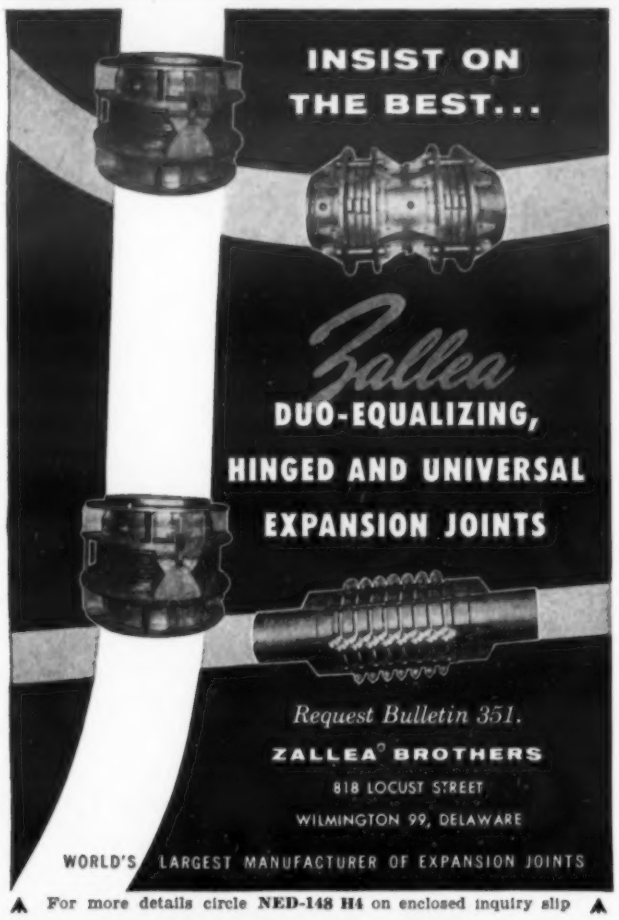
Tire failures like this cost money! This tire failed prematurely. BFG's TW Analysis helps you discover the reasons for tire failure, prevents reoccurrences, saves you tire dollars.

The B. F. Goodrich Company
Tire & Equipment Division
Department TW-404, Akron 18, Ohio
Please send me:
☐ Additional information on your Tire and Wheel Analysis Plan
☐ Free copy of "Industrial Tire Guidebook"
☐ Free copy of "How to Get Extra Service out of Solid Industrial Tires"
Name_____
Company_____
Street_____
City_____ Zone____ State____

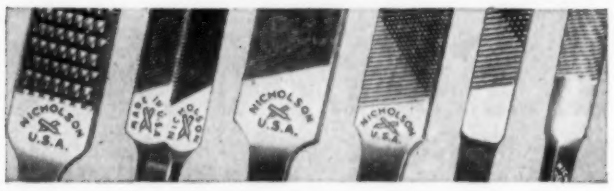
Specify B. F. Goodrich tires when ordering new equipment

RESEARCH KEEPS B.F.Goodrich FIRST IN RUBBER

For more details circle NED-147 H4 on enclosed inquiry slip



▲ For more details circle **NED-148 H4** on enclosed inquiry slip ▲



QUALITY PROVED BY PERFORMANCE

• There's no mistaking a champion—in any field. By cleanness and straightness, Nicholson and Black Diamond brands reflect their leadership in the field of files. But *performance* brings out a lot more—like: the high efficiency of their correctly shaped and accurately cut teeth, their uniform hardness, their high-quality special-analysis steel.

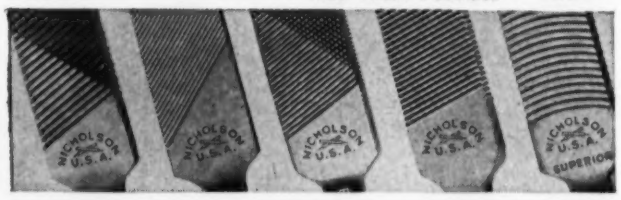
Constant study has also kept Nicholson in stride with the forward movement in shop practices and materials. Nicholson is always alive and alert toward giving you the broadest and most comprehensive file service and the utmost in file values.*

BUY THROUGH YOUR INDUSTRIAL DISTRIBUTOR

***SEND FOR "FILE FILOSOPHY"** for a larger picture of the products of the world's foremost file manufacturer. Invaluable to managing, purchasing and production heads. FREE.

NICHOLSON FILE COMPANY
34 Acorn St., Providence 1, R. I.
(In Canada, Nicholson File Company of Canada Ltd., Port Hope, Ont.)

NICHOLSON FILES FOR EVERY PURPOSE



THIS IS THE WAY TO SEAL OFF LEAKS

Leaks in concrete walls, masonry, cinder block, etc. can be stopped quickly with FLEXTITE. Actually seals against water pressure. Efficient as a trowel coat for sealing off water and dampness. Transforms leaky basement walls into dry surfaces. Used in elevator pits, tunnels, dams, tanks, retaining walls, etc. (Minimum quan. 6 gal.)

MAIL COUPON for TRIAL OFFER

FLEXTITE

FLEXROCK COMPANY • *Offices in Principal Cities*
3603-F Filbert St., Philadelphia 1, Pa.
Please send me complete FLEXTITE information and details of TRIAL ORDER PLAN—no obligation.
Name ..... Title .....
Company .....
Address .....

▲ For more details circle **NED-149 H4** on enclosed inquiry slip ▲

OIL & MOISTURE SEPARATOR for compressed air lines

Available with or without pressure regulating device, type P-HIE oil and moisture separator is for use in air lines. The combination unit will regulate pressures up to 135 psi from an air line pressure up to 250 psi. Separating unit combines centrifugal action with a permanent metal filter which is easily removed for cleaning. A bottom valve drain is used. Made by **DeVilbiss Co.**, 301 Phillips Ave., Toledo 1, O.

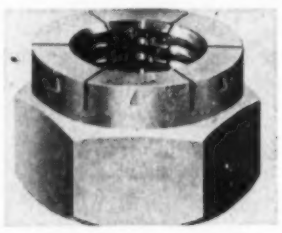
▲ For more details circle **NED-150 H4** on enclosed inquiry slip ▲

TAP-DRILL ATTACHMENT multiple unit for drill press use

Ability to drill, countersink, ream, counterbore and tap on one drill press spindle without removing hand from drill press feed handle is feature of this tap-drill attachment for drill presses. Work is slid under the head from one spindle to another. An automatic reversing tapping spindle makes unnecessary the reversing of the drill press. Capacity is ¼-in. drilling and 5/16-in. tapping. Attachment is available with two, three or four spindles which are spaced to handle work up to 5½ in. OD. Made by **Errington Mechanical Laboratory, Inc.**, 26 Norwood St., Staten Island 4, N. Y.

▲ For more details circle **NED-151 H4** on enclosed inquiry slip ▲

SELF-LOCKING NUT made from high-tensile aluminum



One-piece self-locking aluminum nut weighs 65 per cent less than a comparable standard steel nut but retains steel torque and strength characteristics. Nut is made from 24ST aluminum, and is suitable for service at temperatures up to 250° F. Nut, which can be reused without loss of locking efficiency, is chemically treated against corrosion. It is available in 6-32, 8-32, 10-32, ¼-28 and 5/16-24 sizes. Made by **Standard Pressed Steel Co.**, P. O. Box 581, Jenkintown, Pa.

▲ For more details circle **NED-152 H4** on enclosed inquiry slip ▲

can **GRIES** save me money on quality wing nuts?

YES

Widest selection of stock sizes in two series, "Junior" and "Senior," to fit all cost and application requirements.

With exclusive GRC Finger-Grip recessed wings! Die cast of non-ferrous, rustproof, corrosion-resistant zinc alloy, GRC Wing Nuts are uniformly free of rough edges and imperfections; have accurate, clean threads. Plain bright finish withstands normal usage; all commercial finishes available. Quick deliveries from stock!

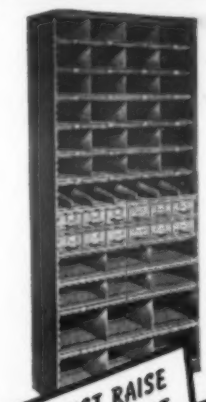
WRITE TODAY FOR SAMPLES, PRICES & BULLETIN

GRC die cast WING NUTS meet every need!

ALL GRC FASTENINGS are die cast for low cost!
- CAP NUTS
- WING SCREWS
- *SMALL* TUBULAR RIVETS

GRIES REPRODUCER CORP.
World's Foremost Producer of Small Die Castings
143 Beechwood Ave., New Rochelle, N. Y.
Phone NEw Rochelle 3-8600

▲ For more details circle **NED-153 H4** on enclosed inquiry slip ▲



NO TOOLS NO BOLTS NO CLAMPS

Berger's Flexi-Bilt Bin Rearranges in Seconds!

Berger's new Flexi-Bilt Bin rearranges quickly, easily to suit your current needs. That's why it never becomes obsolete. Actually over 100,000 arrangements are possible.

Speedy shelf adjustment is an *exclusive* with Berger. Added features are strong, rigid, all-steel construction, easy-to-install boltless bin dividers.

For complete information and specifications, write for Catalog EA 972.

REPUBLIC STEEL CORPORATION
BERGER MANUFACTURING DIVISION
1084 Belden Ave., Canton 5, Ohio • Export Dept.: Chrysler Bldg., New York 17, N. Y.

▲ For more details circle **NED-154 H4** on enclosed inquiry slip ▲

THE TORRINGTON COMPANY
Specialties Division
808 Field Street, Torrington, Conn.

TORRINGTON SPECIAL METAL PARTS

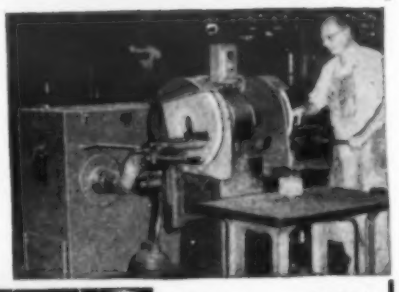
Makers of Torrington Needle Bearings

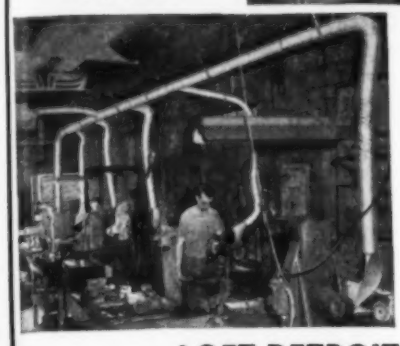
▲ For more details circle **NED-155 H4** on enclosed inquiry slip ▲

STOP DUST
INSTANTLY WITH **DUSTKOP**

300 cfm to 10,000 cfm standard pre-tested units available in stock

- LOW COST
- IMMEDIATE INSTALLATION
- SAVES HEAT
- PORTABLE





2405 ◄ cfm 1400▲ cfm

DUSTKOP

WRITE FOR
- RECOMMENDATION about your dust problem. No obligation
- CATALOG 605-2

AGET-DETROIT CO.
202 S. Main St. Ann Arbor, Mich.

▲ For more details circle NED-156 H4 on enclosed inquiry slip ▲

ACCO products **Wright Hoists**

EASIEST OF ALL TO MAINTAIN

Saves Maintenance Costs

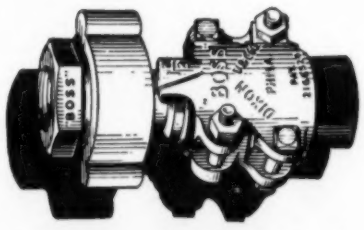
- Remove side cover and get at solenoid coil, limit switch, and transformer. Take off end cover, and brake assembly and controller are completely exposed.
- WRIGHT Frame 1 Speedways have strong, ductile frames, alloy steel gears, NEMA specification motors, and brakes good for three million applications with two easy adjustments.

Write today for literature and prices

ACCO Wright Hoist Division
AMERICAN CHAIN & CABLE
York, Pa., Chicago, Denver, Detroit, Los Angeles, New York, Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

Hoists Trolleys Cranes

▲ For more details circle NED-157 H4 on enclosed inquiry slip ▲



"GJ-BOSS"

GROUND JOINT FEMALE COUPLING, STYLE X-34

For Steam, Air, Water, Hydraulic Hose—High or Low Pressure

Soft-to-hard metal seal provides leakproof, trouble-free connection. Parts — Malleable iron or steel, rustproofed. Furnished with "BOSS" Offset and Interlocking Clamps. Deep, smooth corrugations give an excellent gripping surface for hose when clamp pressure is applied. Sizes ¼" to 6".

From Your Hose Supplier or Industrial Distributor

DIXON VALVE & COUPLING CO.
PRODUCERS OF *The Quality Line* COUPLINGS • NIPPLES • MENDERS • CLAMPS
"BOSS" "GJ-BOSS" "DIXON" "KING" "AIR KING" "DIX-LOCK"
PHILADELPHIA, PA. BRANCHES: CHICAGO • BIRMINGHAM • LOS ANGELES • HOUSTON

▲ For more details circle NED-158 H4 on enclosed inquiry slip ▲

FLUSH TYPE DOCK
surface free of projections

Unobstructed flush design of Herco adjustable dock installations facilitates easy trucking across and in all directions over surface of board. It allows easy approach with hand trucks, dollies or power loaders, and false starts and backups are minimized. Dock boards are same size, quality and of same capacities as other Herco boards. Made by **Karl A. Herman Co.**, 333a W. Fulton St., Grand Rapids 5, Mich.

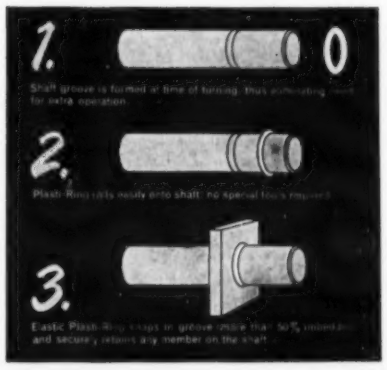
▲ For more details circle NED-159 H4 on enclosed inquiry slip ▲

SAFETY GOGGLES
for spot welders or welder's helpers

Lightweight plastic with an ultraviolet inhibitor is used in these welding goggles to overcome fogging, crazing and brittleness. Style 548-G has round rubber headband and style 549-G has flat elastic or rubber headband. Goggles can be used either inside or outdoors and can be worn over spectacles. They are available in welders and chippers styles with 50-mm clear, antiglare or Cesco-weld lenses. Made by **Chicago Eye Shield Co.**, 2335 W. Warren Blvd., Chicago 12, Ill.

▲ For more details circle NED-160 H4 on enclosed inquiry slip ▲

PLASTIC SHAFT RETAINERS
withstand 250-lb direct shear

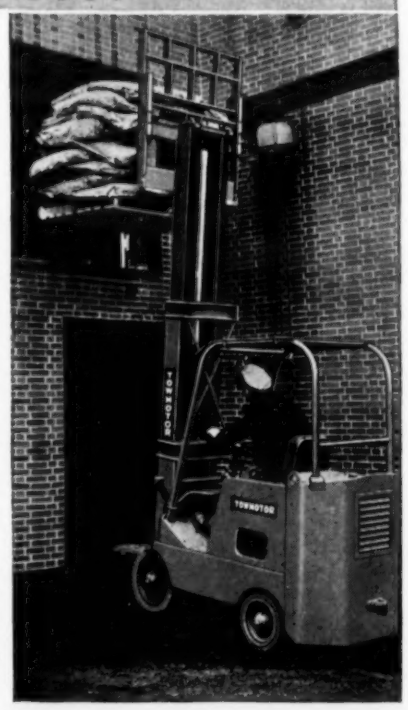


Up to 250-lb direct shear can be withstood by Shakeproof Plasti-Ring shaft retainers which are injection molded of oil and grease - resistant vinyl plastic. Rings are easily rolled into prepared groove to serve as positive-holding shoulder and are highly resistant to friction and wear. They are primarily used in automotive, aircraft, electrical, business machine and toy industries. Made by **Illinois Tool Works**, Shakeproof Div., 2503 N. Keeler Ave., Chicago 39, Ill.

▲ For more details circle NED-161 H4 on enclosed inquiry slip ▲

CUTTING COST

HIGH STACKING
for down-to-earth savings!



Savings are being made by a well-known brewer with Towmotor Fork Lift Trucks. High-stacking increased storage 32% and truck loading is 28 times faster. Such savings are yours with Towmotor *Mass Handling. Have a Towmotor *Mass Handling Engineer* analyze your material handling needs, or write for, "How To Catch Man-Hour Thieves." TOWMOTOR CORPORATION, Div. 2508, 1226 East 152nd Street, Cleveland 10, Ohio.

*TOWMOTOR MASS HANDLING—Moving more units faster, at lowest cost!

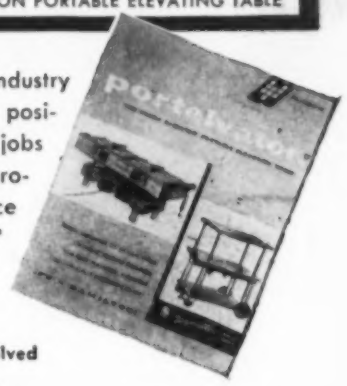
TOWMOTOR THE ONE-MAN-GANG® FORK LIFT TRUCKS and TRACTORS SINCE 1919

IT'S HARD TO COMPETE WITH A TOWMOTOR EQUIPPED PLANT!

▲ For more details circle NED-162 H4 on enclosed inquiry slip ▲

NOW—A FREE BULLETIN 5423

Tells HOW SPECIAL PORTELVATOR® THE HANDY HAMILTON PORTABLE ELEVATING TABLE



- is used throughout industry to do the heavy lifting, positioning, and transporting jobs which have harassed production executives since the word "production" assumed its present meaning.

Find out how others have solved problems parallel to yours.

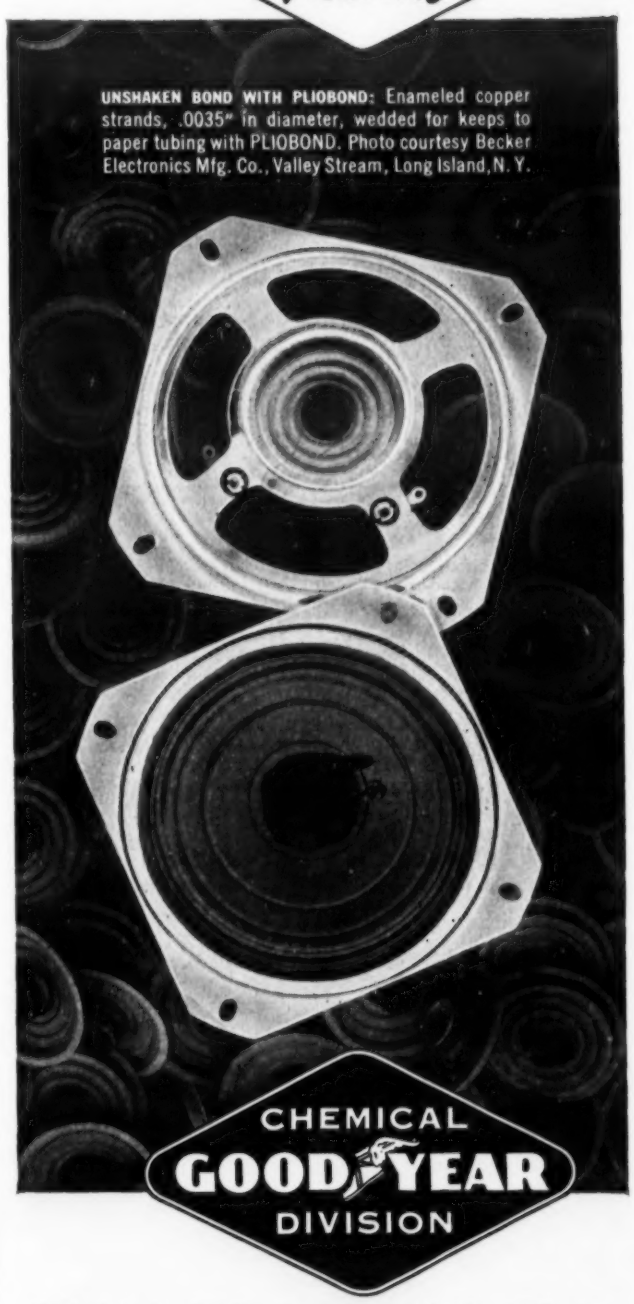
WRITE FOR FREE BULLETIN 5423

ADDRESS THE HAMILTON TOOL COMPANY
901 HANOVER STREET, HAMILTON, OHIO

IT'S A *Hamilton Tool*
USE IT WITH CONFIDENCE

▲ For more details circle NED-163 H4 on enclosed inquiry slip ▲

Another adhesive problem solved with *Pliobond*



Holds tight despite vibration and heat—that's why Becker Electronics Mfg. Co. uses PLIOBOND, the thermoplastic adhesive that "bonds anything to anything." Lacquers and varnishes were previously used to hold "voice coils" in radio, phonograph and TV loudspeakers. But under the terrific vibrations and resulting heat, the fine, enameled copper wire coils popped right off their Kraft paper foundations. Rejects and complaints were high. Then they tried PLIOBOND. It easily and firmly adhered coil to coil and coils to paper—cut complaints, rejects and costs. For details on PLIOBOND, write: Goodyear, Chemical Division, Akron 16, Ohio.

Pliobond—T. M. The Goodyear Tire & Rubber Company, Akron, Ohio

▲ For more details circle NED-164 H4 on enclosed inquiry slip ▲

GENUINE — SIMPLE

SILVER PLATING

"ON THE JOB" WITH POWDER

Purposes of silver plating need not be explained to you of the electrical field.

The biggest problems of silver plating are its convenience, economy and thoroughness. "Cool - Amp" silver plating POWDER is the answer to these problems.

"Cool-Amp" deposits a genuine coat of silver that will not peel off and provides cool maximum conductivity for copper, brass or bronze contacts. It has been proven equal to any electroplating for bolted and stationary contacts and is far more adaptable . . . always ready for use.

"Cool-Amp" POWDER offers a quick and easy solution to heating due to oxidation, improves the continuity of electrical service and reduces maintenance.

"Cool-Amp" is completely harmless to the user and is simple to apply. It can be used by any number of people at the same time. ON THE JOB, in underground vaults and sub stations and in hard-to-get-at places. The only equipment needed is a sharp steel wire brush or abrasive cloth, clean rag and water.

Dampen a rag, dip in "Cool-Amp" and rub on surface. One pound will silver plate approximately 6000 square inches.

$13.50 PER POUND SHIPPED PRE-PAID

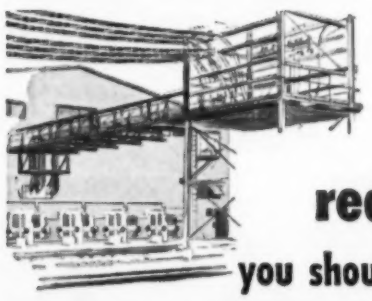
WRITE FOR FREE SAMPLE AND QUANTITY QUOTATIONS

GENUINE • SIMPLE SILVER PLATING

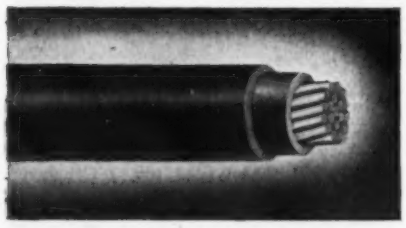
COOL-AMP

Dept. ED 8603 S. W. 17th Avenue • Portland 19, Oregon

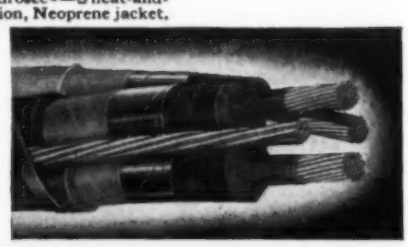
▲ For more details circle NED-166 H4 on enclosed inquiry slip ▲



10 reasons why you should specify, buy, install U. S. GRIZZLY POWER CABLES



U. S. Grizzly® Power Cable, 600 volts—Type RR, single conductor, Hydrosec®—S heat-and-moisture-resistant insulation, Neoprene jacket.



U. S. Grizzly® Power Cable, 5,000 volts—Type RR, 3-conductor, Uskorona®—ozone-resistant insulation—shielded—Neoprene jacket.

1. Lighter in weight than lead-sheathed cable and lead-sheathed armored cables.
2. Greater flexibility.
3. Easier to handle during installation.
4. Easier to splice, tap and terminate.
5. More resistant to chemical corrosion.
6. Unaffected by stray currents.
7. Better protection against weathering.
8. Longer life.
9. Cost less.
10. Made by United States Rubber Company, the *only* electrical wire and cable producer to grow its own natural rubber, make its own synthetic rubber and manufacture its own plastics.

U. S. Grizzly Power Cables are used for general power distribution, and can be installed in conduits, underground ducts, buried directly in the ground, or installed aerially. Neoprene jacket protects against acids, alkalies, oils, and mechanical damage and weathering. (All IPCEA and NEMA specifications complied with.)

Write to address below for free catalog, U. S. Electrical Wires and Cables.

UNITED STATES RUBBER COMPANY

Electrical Wire and Cable Department

Rockefeller Center, New York 20, N. Y.

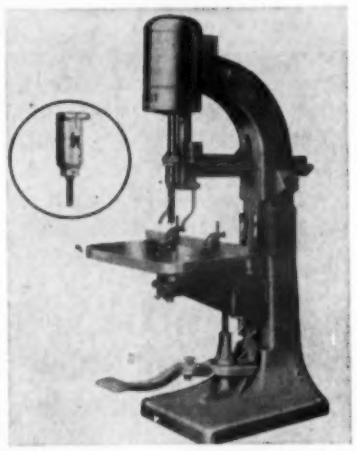
▲ For more details circle NED-167 H4 on enclosed inquiry slip ▲

ELECTRONIC PHOTOTUBE detects impurities in liquids

Light-sensitive 6405/1640 phototube is designed for production inspection of soft drinks, medical solutions and similar translucent liquids. It reacts to minute impurities which have been bottled inadvertently. Tube is designed to be used in equipment which reacts only to pulses of light caused by particles in motion. Before bottles reach the inspection point, they are rotated swiftly and then stopped, causing the contents to swirl. Even transparent impurities will then disturb the light beam sufficiently to cause tube to react and trigger an electronic reject system. Tube has a wide response and can be used with an incandescent light source. It is sensitive to red and near-infrared radiant energy. Made by **Radio Corp. of America,** RCA Victor Div., Tube Dept., Harrison, N. J.

▲ For more details circle NED-168 H4 on enclosed inquiry slip ▲

WOOD BORING MACHINE improved model has 3-hp motor



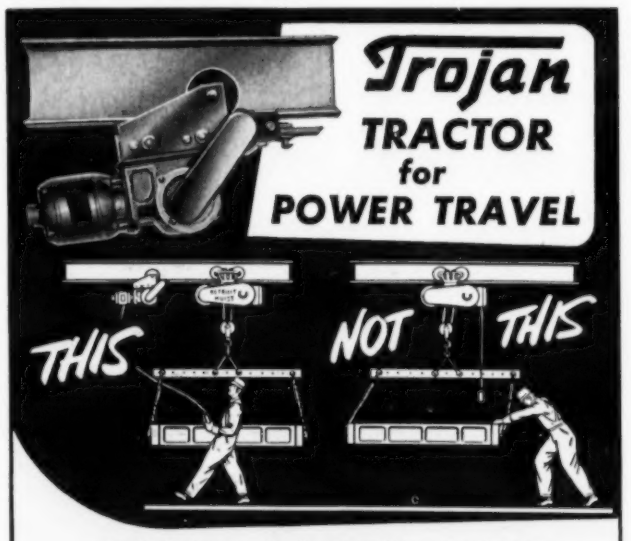
Improved model G250 foot feed boring and mortising machine for woodworking has a 3-hp high and low speed motor. This permits cutting speed to be suited to the hole diameter. Motor is totally enclosed and fan-cooled with a conduit from the motor to provide a stream of air to the cutter to clear chips. Adjustable pivot point in the feed mechanism provides increased leverage for cutting large holes. Machine will bore or mortise to the center of stock 40 in. wide. Spindle stroke is adjustable up to 9 in. and vertical adjustment of table is provided. Cradle with graduated scale provides level table or tilt for compound angle boring. Made by **B. M. Root Co.,** 650 Coble St., York, Pa.

▲ For more details circle NED-169 H4 on enclosed inquiry slip ▲

Pipe Repair Clamps & Saddles

M. B. Skinner Co.—Extensive line of pipe repair clamps, service saddles, valve and bibb reseaters, bibb seat dressers, pipe benders and boss hickeys are covered in illustrated catalog No. 54 of 28 pages. Information on repair of all types of leaks in water, steam, gas, oil, ammonia and brine lines is given.

▲ For more details circle NED-170 H4 on enclosed inquiry slip ▲



Attached by a simple draw-bar, the Trojan Tractor quickly converts existing, slow, hand-pushed hoists and light overhead cranes into fast, power-traveled units. Save time, effort; reduce material handling costs.

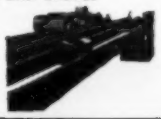
• *Ask for Trojan Tractor Bulletin 810 today.*

DETROIT HOIST & MACHINE CO.

8267 Morrow St., Detroit 11, Mich.

Designers and Manufacturers of Hoists and Cranes

Since 1905



▲ For more details circle NED-171 H4 on enclosed inquiry slip ▲

NO PASSENGERS ALLOWED

Courtesy Best Foods, Inc.

RAISING AND LOWERING LOADED PALLETS

Where pallet loads are transferred from one level to another, this type of conveyor does the raising or lowering quickly, safely and automatically. The carrier and stations at all levels are equipped with reversible power units for loading or discharging the pay-load.

At Alvey, every conveyor problem is special. Every system is exactly tailored to your particular needs . . . to reduce costs and speed product handling. An Alvey Engineer will visit your plant and evaluate your problem. Write for appointment.

ALVEY CONVEYOR MANUFACTURING COMPANY

9259 Olive Street Road, St. Louis 24, Missouri

ALVEY Branch Offices in Principal Cities

129

▲ For more details circle NED-172 H4 on enclosed inquiry slip ▲

Tells all about abrasives for flat surface grinding

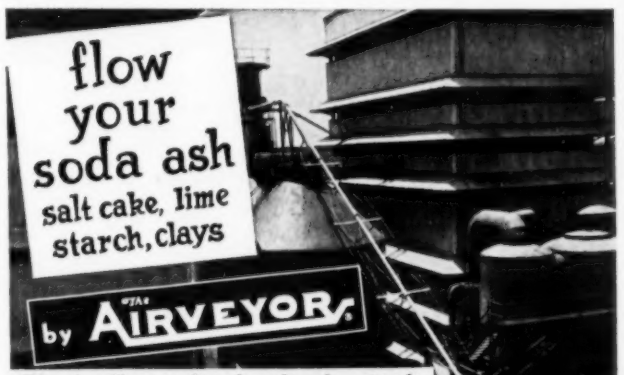
- Grains and Bonds
- Selection
- Grinding of various materials
- Best Speeds
- Coolants
- Mounting
- Handling and Storing
- Dressing

GARDNER MACHINE COMPANY

460 Gardner St., Beloit, Wisconsin

120A

▲ For more details circle NED-173 H4 on enclosed inquiry slip ▲



Flowing lime, soda ash, salt cake, starch, clays, and similar materials with the Airveyor, unloading from cars to storage or in-plant conveying is the simplest, most economical conveying method for the handling of mill-supply chemicals in the process industries.

Conveying by air has been a specialty of the Fuller Company for over a quarter of a century. Experience places it in a top position to recommend and design a system which will give you the most economical results.

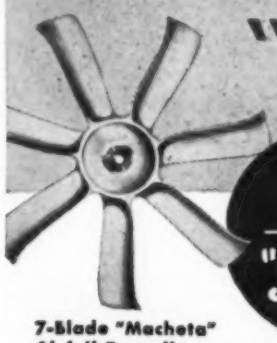
If you are interested in keeping conveying at a minimum, if you want to improve your operating balance sheet, talk to a Fuller engineer. A study of your operations will cost nothing, may point the way to consistently profitable operation and a smoother production flow.

FULLER COMPANY, Catasauqua, Pa.

Branch Offices: Chicago • San Francisco
Los Angeles • Seattle • Birmingham A-194

▲ For more details circle NED-174 H4 on enclosed inquiry slip ▲

performance is in the "prop"



NEW Aerovent "Semi-Pressure" FANS

7-Blade "Machete" Airfoil Propeller

Now get top efficiency against resistances to 4½" SP *without* special equipment! Standard Aerovent units with new 7-blade propellers move more air at *slower* motor speeds with *less* horsepower. Write for folder.

Ask for bulletin S-50!

All Aerovent Fans are rated in accordance with the Standard Test Code and U.S.D.C. Comm. Std. CS178-51.

Aerovent Fan Company, Inc.
Ash and Blake Streets Piqua, Ohio

For more details circle NED-175 H4 on enclosed inquiry slip

New THERMALINK Automatic Electric OIL PRE-HEATING UNITS

- ★ Integral adjustable thermostat eliminates wiring problems.
- ★ Adjustable temperature dial marked in degrees.
- ★ Available with both thermostat and motor control built into unit.
- ★ No relays or auxiliary controls needed.
- ★ Available with pipe-thread or flange header.
- ★ Wattages from 1000 through 7500.
- ★ Conservative watt-densities prolong life, minimize carbonization.

WRITE DEPT. N FOR DATA SHEETS PRS-152 & FRS-152

ELECTRO-THERM INC. • SILVER SPRING, MD.

For more details circle NED-176 H4 on enclosed inquiry slip

NOW! Shear strength *twice* that of any other fastener!

NEW Lion "Hi-Strength" design fills every need for parts that must be fastened, taken apart, buttoned tight quickly

(Top) New Lion "Hi-Strength" fastener assembled. *(Inset)* Beveled counter sink which increases area over which stress is distributed

Here's a new and better answer to your problem of metal-to-metal fastening where high shear stress and vibration are factors.

It's the Lion "Hi-Strength" fastener, combining speedy quarter-turn opening and closing with a shear strength of 4750 lbs!

This "Hi-Strength" fastener is remarkably strong because shear load is evenly distributed over the area of the fastened parts. The secret lies in the *beveled* counter sink in the sheet and the nut.

In addition to high shear strength, its tensile strength is 3000 lbs. Sheet separation is zero up to 4750 lbs. Misalignment is as much as .125 with high shear qualities. Regardless of the number of times it's opened or closed, there is no wear. It cannot be overtorqued (up to 3750 lbs.). It cannot be fastened incorrectly. It is no larger than a standard No. 5!

To test it yourself, write for a free mounted working sample. Just drop us a line on your company letterhead.

LION FASTENER, INC. 600 Main St., Honeoye Falls, N. Y.
In Canada: A. T. R. Armstrong Co., 50 St. Clair Avenue West, Toronto

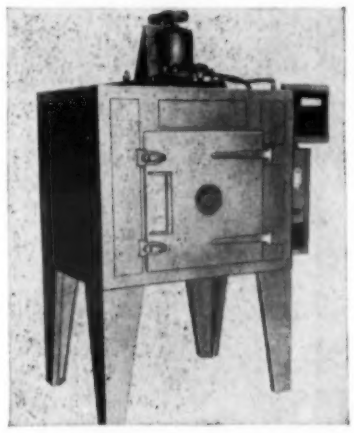
For more details circle NED-177 H4 on enclosed inquiry slip

CHAIN PIPE WRENCHES
safety tools have reversible jaws

Four sizes of bronze safety chain pipe wrenches have a constant gripping ability that minimizes chance of slippage and personal injury. Made of spark and corrosion resistant and non-magnetic Ampco metal, tools have beryllium copper jaw inserts that are reversible and interchangeable. Sizes are 20, 27, 36 and 72 in. for pipe from ⅛ to 1½, ¼ to 2½, ¾ to 4 and 2 to 12 in., respectively. Made by **Ampco Metal, Inc.**, Dept. 8-54, 1745 S. 38th St., Milwaukee 46, Wis.

For more details circle NED-178 H4 on enclosed inquiry slip

ELECTRIC OVEN
temperature range is 200 to 1000° F



Widely variable temperature range makes this oven suitable for many different sorts of work, including annealing, baking, brazing, curing, heat treating, normalizing, paint testing, processing and soldering. Banks of heaters are controlled by a three-way selector switch for obtaining low, medium or high heat. Temperature range is 200 to 1000° F. Forced air recirculation is used, employing a 10-in. stainless steel fan. Pyrometer-type instruments provide automatic temperature control. Interior of oven is stainless steel, measuring 24 x 22 x 24 in. Adjustable shelves are provided. Either 220 or 440 v operation can be furnished. Made by **Steiner-Ives Co.**, 433 Springfield Ave., Union, N. J.

For more details circle NED-179 H4 on enclosed inquiry slip

Electronic Components

I-T-E Circuit Breaker Co.—Described in illustrated 36-page catalog R-200 are subminiature resistors, precision and power resistors, camera and receiver type yokes, focus coils and IF and RF transformers and coils. Charts, tables, drawings and selection and application data are also included.

For more details circle NED-180 H4 on enclosed inquiry slip

YOU SHOULD KNOW THESE GREAT TIME SAVERS

FOR CUTTING

LESTO Electric HAND SAW

Jig, rip, scroll, band, crosscut, coping, key-hole saw for wood, metal, plastic, cement, etc. Turns out more work in less time . . . cleaner work with less effort!

FOR FINISHING

GUSTO ORBITAL SANDER

High efficiency on flat or curved surfaces . . . vertical or horizontal . . . even tight spots right to edges. No belts or gears. Reliable, durable sander for wood, metal, plastics, plaster, paint, etc. Largest sanding pad of any hand sander.

Sold and Serviced in Principal Cities Throughout U.S.A.

VICTOR J. KRIEG, Inc.
Dept. C, 611 Broadway
New York 12, N. Y.
GRamercy 7-5757

VICTOR KRIEG, INC.
Dept. C, 611 Broadway
New York 12, N. Y.

Gentlemen:
Please send full details on LESTO Hand Saw and GUSTO Sander.

Name _____
Company _____
Address _____
City _____ Zone ____ State _____

For more details circle NED-181 H4 on enclosed inquiry slip

PAGE FENCE -Since 1883

• AMERICA'S FIRST WIRE FENCE •

• Page Chain Link Fence, pioneered by Page and made only by Page, is quality controlled from raw metal to erected fence. Whether you choose heavily-galvanized Copper Bearing Steel, or long-lasting Stainless Steel, or corrosion-resisting Aluminum, you'll have a rugged fence on sturdy metal posts deep-set in concrete. Choose any one of 8 basic styles, varied by heights, types of gates, posts, top rails and barbed wire strands for extra protection. And to be sure of reliable workmanship your fence will be expertly erected by a specially trained firm. For helpful Page data and name of member nearest you—

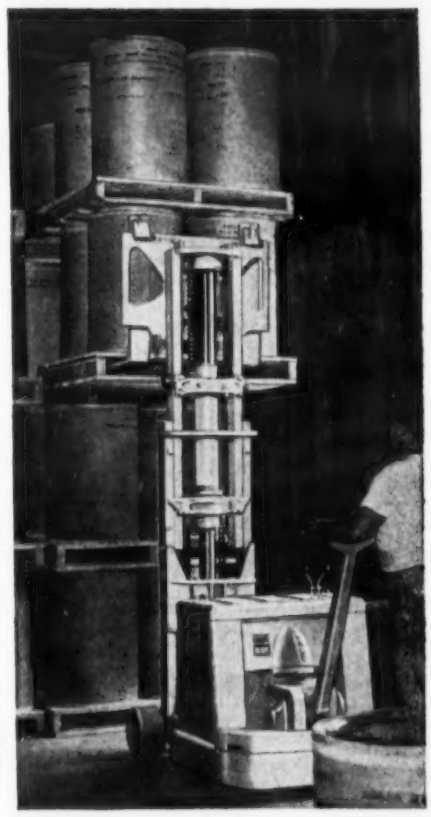
Write to PAGE FENCE ASSOCIATION in Monessen, Pa., Atlanta, Bridgeport, Chicago, Denver, Detroit, Los Angeles, Philadelphia, New York or San Francisco.

PRODUCT OF PAGE STEEL & WIRE DIVISION OF AMERICAN CHAIN & CABLE COMPANY, INC.

For more details circle NED-182 H4 on enclosed inquiry slip

NEW YALE WORKSAVER IS BETTER THAN EVER

NEW ECONOMY
NEW EFFICIENCY
NEW SAFETY



Shown here is a Yale Worksaver stacking heavy containers ▶

Look at the features now added to this popular High-Lift Truck

Lift . . . increased 10" with no increase in overall height. **Counterweight**... redesigned for greater safety. **Contactors** . . . nylon-covered contactors in commutator are safer, more efficient. **Time Delay** . . . mechanical time delay in 2nd speed gives smoother acceleration. **Drive Tire** . . . new type drive tire cuts change-over time 60% . . . provides greater stability, longer life. Acquire your Yale Worksaver under flexible "3-Way-Finance-Plan" tailored to your precise needs.

YALE*

INDUSTRIAL LIFT TRUCKS AND HOISTS

*Reg. U. S. Pat. Off.

MAIL THIS COUPON TODAY

The YALE & TOWNE Manufacturing Co., Dept. 378
11000 Roosevelt Blvd., Phila. 15, Penna.
Please send information on new Yale Worksaver

Company _____
Name _____ Title _____
Street _____ City _____ State _____

In Canada write: The Yale & Towne Manufacturing Company St. Catharines, Ontario, Canada

Gas, Electric, Diesel & LP-Gas Industrial Trucks
Worksavers • Hand Trucks • Hand & Electric Hoists • Pul-Lifts

For more details circle NED-183 H4 on enclosed inquiry slip

Bulletin 705 Reversing Switches

- Contactors mechanically interlocked
- Silver-alloy contacts need no cleaning

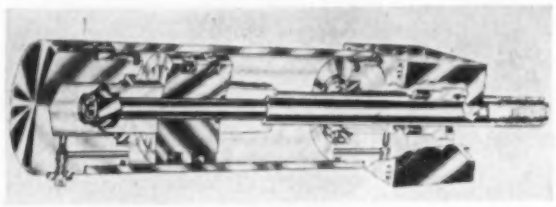
This complete line of switches provides reliable across-the-line starting and reversing of polyphase squirrel-cage and slip-ring motors, as well as certain types of single-phase motors used on machine tools and other industrial equipment. May also be used in motor plugging operations. Write for descriptive bulletin. Allen-Bradley Co., 1334 S. Second St., Milwaukee 4, Wisconsin.

ALLEN-BRADLEY
QUALITY
MOTOR CONTROL

▲ For more details circle **NED-185 H4** on enclosed inquiry slip ▲

AIR & HYDRAULIC CYLINDERS for 200-psi air, 750-psi oil service

Unusual compactness resulting from elimination of tie rods is feature of improved Spacemaker cylinders for either air or oil hydraulic service. Maximum op-



erating pressure is 200 psi for air, 750 psi for oil. Improved cushions are fast acting. Solid steel heads, heavy wall seamless steel body and chrome plated cylinder walls and piston rods are used. Units are offered in six standard styles of mounting, bores from 1 through 4 in. and strokes from 1 through 12 in. in increments of 1 in. Cushioned or noncushioned 14, 16, and 18-in. models are available to meet requirements. Made by **Tomkins-Johnson Co.,** 609 N. Mechanic St., Jackson, Mich.

▲ For more details circle **NED-187 H4** on enclosed inquiry slip ▲

ELECTROSTATIC PAINTING uses reciprocating, spinning disk to finish large or small products

Up and down motion of the reciprocating, spinning disk type atomizer for use with the Ransburg electrostatic spray painting process No. 2 uniformly finishes small or large parts within broad limits. They are hung on a conveyor which makes a circular loop in the electrostatic spray area and the atomizer is located in a floor pit or mounted overhead in the center of the loop.

Paint is pumped to the center of the disk which rotates to feed it to the atomizing edge. High direct-current voltage, usually around 90 kv, is imposed on the disk, establishing an electrostatic field between disk and parts hanging on the grounded conveyor. This atomizes the paint into a fine spray and electrostatically attracts it to the surrounding parts.

Different reciprocating speeds may be used to increase or decrease the amount of paint required to cover a given surface. Atomizer does not require precise positioning of parts in relation to the atomizer. It will tolerate a 10 to 24-in. difference with practically no spray pattern problem. Made by **Ransburg Electro-Coating Corp.,** 1204 Barth Ave., Indianapolis 7, Ind.

▲ For more details circle **NED-188 H4** on enclosed inquiry slip ▲

USE THIS NEW SAFETY MATERIAL ALL OVER YOUR PLANT

Safety **GRIP-STRUT** Pat. Pending

NON-SKID—RUGGED—LOW COST

Safety Grip-Strut is a new basic material. All one piece, steel or aluminum, in various sizes and gauges. Sold like lumber, used like lumber and stocked in your storeroom like lumber. Ideal for on-the-job fabricating. Not welded, riveted or expanded. It presents an open space, in a diamond shaped pattern, in excess of 75% of the area for ready access of light and air and gives a positive NON-SKID footing in all directions. Ideal for stair treads, fire escapes, cable trays, work platforms, catwalks, flooring and for original equipment safety treads. Your own mechanics can install it—it's inexpensive, yet permanent and safe.

Write today for new catalog showing loadings and methods of easy application in your plant.

Distributors in all principal cities.

GRIP-STRUT division
THE GLOBE COMPANY
Manufacturers since 1914
4002 S. Princeton Ave. • Chicago 9, Ill.

▲ For more details circle **NED-190 H4** on enclosed inquiry slip ▲

SPECIALS may match the prices of STANDARDS

If ordered in fair quantities, recessed hex head screws cost no more than standard machine screws, and actually much less than trimmed hex head screws.

The saving results from elimination of one production operation, without loss of mechanical values. The difference is in appearance. And even that may be in favor of the recessed head.

To order only, made to standard dimensions in sizes to suit your needs or to your specifications.

Get our prices and deliveries on your requirements. In fact write us about special upset, and rolled thread products of any kind. The cost may be lower than you think.

MACHINE SCREWS AND SPECIAL FASTENERS ARE OUR BUSINESS

WRITE FOR OUR CATALOG

THE PROGRESSIVE MANUFACTURING COMPANY
46 NORWOOD ST., TORRINGTON, CONN.

▲ For more details circle **NED-186 H4** on enclosed inquiry slip ▲

Simplicity

Means . . . PRODUCTION ECONOMY

Assembly of parts like this with DRIV-LOK Pins is simple—fast—more economical. Just drill through collar and shaft and drive in the pin. No reaming or staking necessary. Vibration proof. DRIV-LOK Pins are used in many industries for countless applications. Made in many types and sizes to fit your needs. Write for CATALOG showing sizes and applications.

DRIV-LOK PIN COMPANY
715 Chauncey Street, Sycamore, Illinois

▲ For more details circle **NED-191 H4** on enclosed inquiry slip ▲

Commander TAPPER

★ Wider Range...1 Tapper Handles #0 to 3/4" Taps

★ Automatic Tap Protection

★ Furnished to fit any Drill Press

Commander—"The Tapper That Thinks For Its Operator," has the adjustable full range torque control that instantly stops any tap when it becomes dull, loaded, strikes a hard spot or bottoms in blind hole tapping. Assures maximum tap protection, higher production, even with inexperienced operators.

Your nearby Commander Distributor can give you a demonstration in your own plant. Write for his name and a copy of the NEW Commander Full Line Catalog

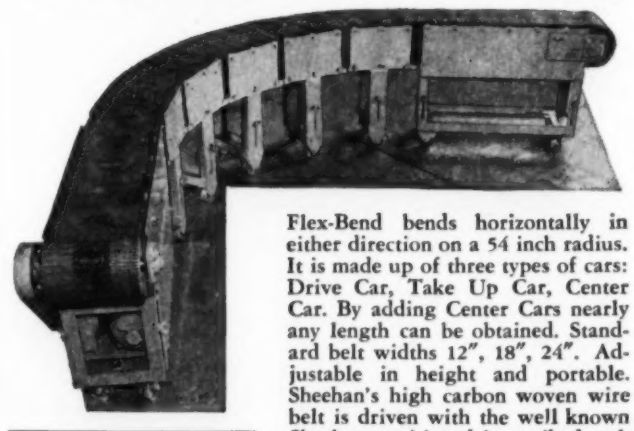
COMMANDER MFG. CO.
4220 W. Kinzie St. Chicago 24, Ill.

Product of *Commander*... Builder of Production Tools

▲ For more details circle **NED-189 H4** on enclosed inquiry slip ▲

Sheehan's FLEX-BEND CONVEYOR

Place your equipment where you like, Flex-Bend gets there horizontally.



Flex-Bend bends horizontally in either direction on a 54 inch radius. It is made up of three types of cars: Drive Car, Take Up Car, Center Car. By adding Center Cars nearly any length can be obtained. Standard belt widths 12", 18", 24". Adjustable in height and portable. Sheehan's high carbon woven wire belt is driven with the well known Sheehan positive drive spiked pulley. Flex-Bend rolls completely on roller and ball bearings. Cuts down friction, giving long life. Rigidly built, easy to move. Practically maintenance free.

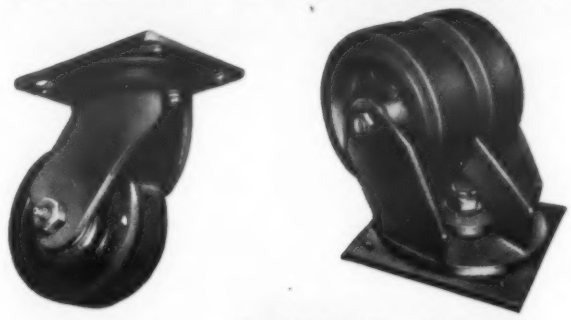
Flex-Bend is sold by the car. Write for literature, and exceptionally low prices.

Conveyors

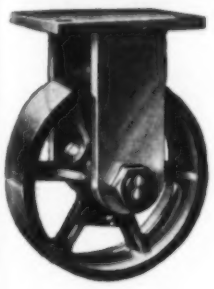
R. T. SHEEHAN CO.
8070 N. Territorial Road Plymouth, Mich.

▲ For more details circle **NED-192 H4** on enclosed inquiry slip ▲

FROM ANY ANGLE...



...THEY ARE THE *BEST!*



● Albion Industrial Casters are better-built to better serve you. Engineered to save you dollars and man hours by moving greater loads faster, safer, smoother . . . and to do it economically!

Albion casters are readily available in any size, style, capacity and wheel type. Make Albion your *one dependable* source for all industrial casters and wheels.

Represented in Canada by
C. J. McDONALD
Rear 1564 Queen St. W., Toronto

ALBION INDUSTRIES, INC.
ALBION • MICHIGAN

▲ For more details circle **NED-193 H4** on enclosed inquiry slip ▲

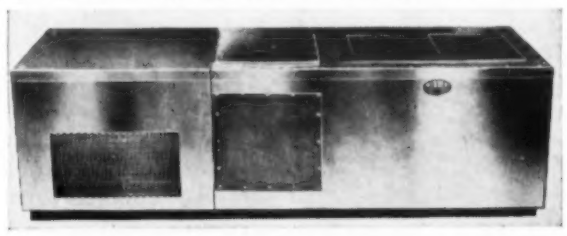
OPTICAL PROJECTOR
portable instrument has 7-in. screen

Model 67 optical projector is a portable 7-in. screen instrument which embodies either vertical or horizontal lens systems or both in combination with contour or front surface projection. Working table operates on a fine-pitch screw for accurate vertical travel. Micrometer measuring stage, graduated in 0.0001-in., attaches to table. Either opaque screen in enclosed light-tight hood or ground-glass screen which can be used with overlay charts is available. Selector switch gives front surface or contour lighting or both in combination. Standard lenses range from 10 to 100-X magnification. Accessories such as measuring and jackscrew stages are available. Made by **Stocker & Yale, Inc.,** Dept. FFK, Marblehead, Mass.

▲ For more details circle **NED-195 H4** on enclosed inquiry slip ▲

TEMPERATURE TEST UNIT
chambers can work independently, both have —100 to 200° F range

Both 1-cu ft compartments of this chest-type test chamber for production temperature testing have range from −100 to 200° F with gradient temper-



ature variation of less than ½° F at any point within the chambers. Solenoid control is used in conjunction with refrigerating system, and proportioning temperature control instrument assures control within ±½° F at any point within range. Heat cycle is applied through sealed electrical elements.

Accelerated temperature changes are accomplished through 500 cfm fan system in each chamber which recirculates or changes air 500 times per minute. Test chambers can operate independently even at extreme temperature differences. Unit is stainless steel with test chamber standard in copper. It measures 30 x 24 x 96 in. and is self-contained. Made by **Webber Mfg. Co.,** Dept. N-203, 2740 Madison Ave., Indianapolis 3, Ind.

▲ For more details circle **NED-196 H4** on enclosed inquiry slip ▲

Replace Obsolete Steam-Wasting Units With

illinois
SPECIALTIES

Equip your radiators with smooth-acting Illinois Supply Valves and sensitive, steam-tight Illinois Thermostatic Traps.

Improve system operation by replacing thermostatic drip traps with Illinois Float and Thermostatic Traps wherever rapid elimination of condensate is essential.

Illinois Float and Thermostatic Traps are made in three series and for operating ranges from 50 pounds pressure to 25 inches vacuum.

Investigate! Compare! Try Illinois Traps on your worst service and be guided by results!

Write for Bulletins

ILLINOIS ENGINEERING COMPANY
2039 SOUTH RACINE AVENUE, CHICAGO 8
DIVISION OF AMERICAN AIR FILTER COMPANY, INC.

▲ For more details circle **NED-198 H4** on enclosed inquiry slip ▲

THESE
"PISTON RING" GAS SEALS
save welding time and maintenance costs

With PREST-O-WELD Blowpipes, you get perfect gas seals instantly between head and handle because rubber "O" rings thrust outward like piston rings to seal without excessive pressure.

PREST-O-WELD "O" rings never mash out of shape. They last longer, give extra service, and are easily replaced. Just hand-tighten the connection nut to lock a welding head in any position.

Ask your LINDE jobber for a demonstration or write for more details. LINDE AIR PRODUCTS COMPANY, a Division of Union Carbide and Carbon Corporation, 30 E. 42nd St., New York 17, N. Y.

PREST-O-WELD Trade-Mark **Welding Apparatus** • **get it from your LINDE JOBBER**

The terms "Linde" and "Prest-O-Weld" are registered trade-marks of Union Carbide and Carbon Corporation.

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SIMPLICITY AND INGENUITY have made

American STORAGE RACKS

First Choice

here's an exclusive American feature

American Tubular Storage Racks are designed to meet practically every storage need. They are used in every type of business, large and small. Get the facts on American Racks before you decide on any type rack. Send for catalogue.

AMONG AMERICAN USERS ARE:

Atomic Energy Commission
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S. S. Kresge Co.
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AMERICAN METAL PRODUCTS CO.
STORAGE RACK DIVISION
5959 Linsdale • Detroit 4, Michigan

▲ For more details circle **NED-194 H4** on enclosed inquiry slip ▲

for your parts cleaning problems--- **a GRAYMILLS COLD DEGREASER saves time, cleans better, at less cost**

USED BY 3854 PLANTS FOR JOBS LIKE THESE:

Cleaning dies, tools, etc.
Flushing machined parts
Flushing "Hydraulic" parts
Cleaning bearings
Cleaning Motors and Electrical Equipment
Maintenance and Service Work
Removing Rust Preventatives

THE SAFE, EASY, LOW COST WAY TO REMOVE OIL, CHIPS, GREASE, DIRT and PRESERVATIVES ON JOBS LIKE THIS:

For production, maintenance or service. Use safe, non toxic, low cost solvents. 15 Models. 40 to 300 gallon capcity.

SEND FOR NEW CATALOG

No Installation Headache Portable Too!

GRAY-MILLS

GRAYMILLS CORPORATION
3717 NORTH LINCOLN AVENUE • CHICAGO 13, ILLINOIS
WEST COAST: 4511 MELROSE AVE. • LOS ANGELES 29

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For fast, accurate inspection and measurement

Fast, accurate, and requiring little skill to operate, the Kodak Contour Projector may well be the answer to your inspection, assembly, or measurement problems.

Few objects are too small or complicated for rapid, complete inspection under magnification with a Kodak Contour Projector. And you can handle large parts, too, for there's an unvarying 8 inches between lens and object at all magnifications from 10× to 100×. Surface illumination for checking blind holes, cavities, or other surface features is available by the mere flick of a switch.

To learn how the Kodak Contour Projector can be used in your plant, send for Booklet F1-68.

Special Products Sales Division
EASTMAN KODAK COMPANY
Rochester 4, N. Y.

the KODAK CONTOUR PROJECTOR

Kodak TRADE MARK

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LOOK INTO YOUR
Speed Reducer Cost

WITH
OHIO

Ohio double speed reducer DPL series, three sizes, ratios, 100-1 to 4,000-1. From ¼ to 2½ horse power.

CHECK THESE ADVANTAGES
- Quality
- Design
- Dependability
- Purchase Price
- Delivery

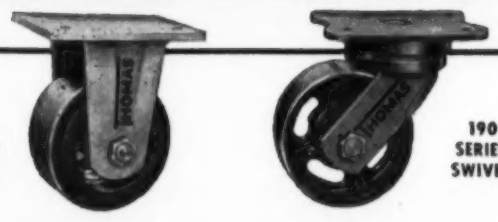
Ohio Speed Reducers are famous for their performance. You will find them operating in every great industrial center in the world. Perhaps Ohio Gear can serve you as well. There is a Distributor conveniently located near you — or write to Ohio Gear direct.

OHIO GEARS

ESTABLISHED 1918
THE OHIO GEAR COMPANY
1320 EAST 179th STREET • CLEVELAND 10, OHIO

For more details circle NED-201 H4 on enclosed inquiry slip

HEAVY
"FORGED"
CASTERS



290 SERIES RIGID
190 SERIES SWIVEL

Built for extra-heavy duty, these forged steel casters can be used on your hardest, toughest jobs—to carry heavy loads under the most severe operating conditions. Hyatt roller wheel bearings have hardened inner race around axle bolt and between fork sides for accurate wheel fit without binding. Whatever your caster requirements, see THOMAS *first*.

There is a THOMAS Representative in every Trade Area. Write for free literature describing the complete line of THOMAS "Job-Suited" Trailers, Trucks, Casters and Wheels.

THOMAS
THOMAS TRUCK & CASTER COMPANY
523 MISSISSIPPI RIVER, KEOKUK, IOWA

For more details circle NED-202 H4 on enclosed inquiry slip

"AUTO-STEER"
SAFETY
TRUCK

No. 298
- *FOR HEAVY LOADS*
- *MAKES SHARP TURNS*
- *NO DANGER OF TIPPING*

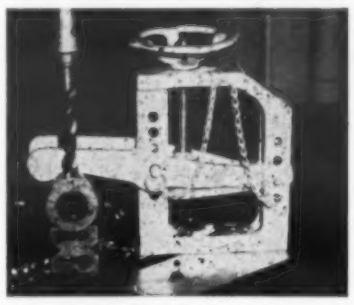
Wheels are located under the frame so that each corner is supported at all times. Auto-Steer front wheel assembly permits right angle turns and easy maneuvering of high, heavy loads even in a limited space. Large safety handle operates auto-steer device so that both wheels turn in unison. Ring grip permits tractor or hand operation. Available in 3-ton and 5-ton capacities, in sizes "Job-Suited" to your requirements.

There is a THOMAS Representative in every Trade Area. Write for free literature describing the complete line of THOMAS "Job-Suited" Trailers, Trucks, Casters and Wheels.

THOMAS
THOMAS TRUCK & CASTER COMPANY
523 MISSISSIPPI RIVER, KEOKUK, IOWA

For more details circle NED-203 H4 on enclosed inquiry slip

ADJUSTABLE CLAMP
used in machine tool table T-slots



Drilling, milling, boring and other machining operations are facilitated with the Safety Adjustable Clamp which provides 8000 psi of equalized pressure with compound leverage. It clamps in the T-slot of a work table. Adjustable pins are set, the work inserted, the leverage wheel turned and machining can begin. A 12-in. model is presently available, with 4 and 6-in. models to be available shortly. Made by **Safety-Adjustable-Hold-Down Clamp Co.,** 600 Albany St., Brunswick, Ga.

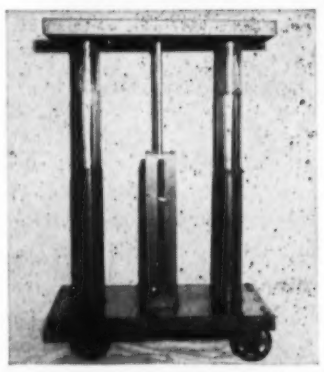
For more details circle NED-204 H4 on enclosed inquiry slip

BUCKET LOADER
has torque converter transmission

Torque converter transmission of model LH-75 Trojan Loadster ¾-cu yd bucket loader eliminates clutch wear during frequent forward-to-reverse motion. Four working speeds and one high speed range are provided in both directions. Directional shifting lever is located below the steering wheel. Machine loads over the drive wheels to provide ample traction. Made by **Contractors Machinery Co.,** Dept. NED, P. O. Box 191, Batavia, N. Y.

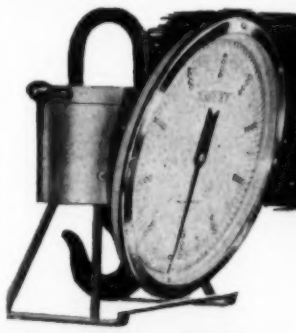
For more details circle NED-205 H4 on enclosed inquiry slip

HYDRAULIC LIFT TABLE
has 2000-lb capacity



Applications for this all steel welded hydraulic lift table include positioning for welding, adjustable work bench and transporting heavy dies and castings to presses or milling machines, then raising them to the desired height. Table has a 2000-lb capacity with a 3000-lb hydraulic unit capacity. It measures 29 x 19 in. and raises from 30 to 48 in. above the floor. Mounting is on two 5-in. rigid casters and two 5-in. swivel casters. Floor lock is also included. Made by **W. J. McElmoyl Co.,** Church St. & Borden Rd., Groveville, N. J.

For more details circle NED-206 H4 on enclosed inquiry slip



$200 price reduction
ON EMERY CS-10
CRANE SCALE

Increased production makes a new low price on the Emery CS-10 Crane Scale . . . the best in its field . . . now only $995.

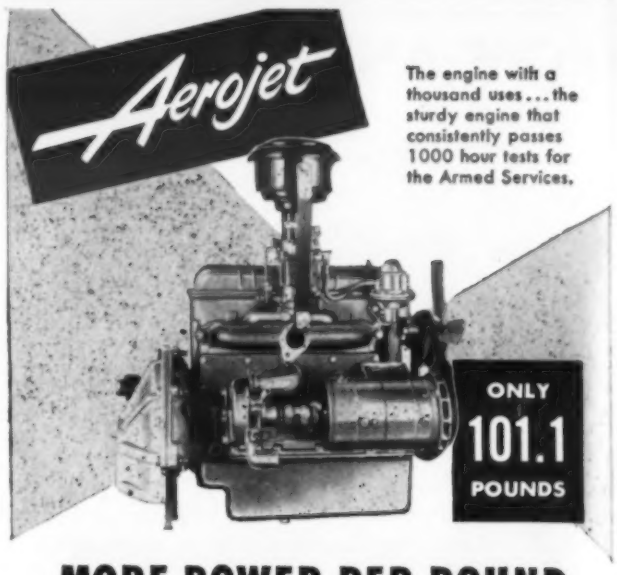
The Emery CS-10 Crane Scale provides . . .
- weighing up to 10,000 lbs. *in transit.*
- only 19⅛ in. headroom required.
- guaranteed accuracy ±0.2%.
- no knife edges, no sticky seals, no wear.
- rugged industrial-type construction.
- big 21½ in. unbreakable dial for easy reading.

Order your Emery CS-10 Crane Scale at the new low price. Send for information today.

THE A. H. EMERY CO. NEW CANAAN 6 CONNECTICUT

Please send me descriptive bulletin No. 541.
NAME _____
POSITION _____
Attach to, or write on, your company letterhead.

For more details circle NED-207 H4 on enclosed inquiry slip



MORE POWER PER POUND THAN ANY OTHER ENGINE

The most powerful (25½ h.p.), economical, gasoline powered 4 cylinder engine ever put together in such a small package. The pet of the Armed Services. Tens of thousands now in use all over the world.

Write for Free Booklet and Specifications DEPT. NE 8
AEROJET-GENERAL CORPORATION
2530 Spring Grove Avenue • Cincinnati 14, Ohio

For more details circle NED-208 H4 on enclosed inquiry slip

UNIVERSAL
DRILL BUSHINGS
OUTLAST
THEM ALL!

Machined from high quality steel. Superfinish bores reduce wear. Blended radius helps prevent tool hang-up and breakage. 100% concentricity and hardness tests insure accuracy and uniform quality. Available in a complete range of standard sizes and lengths. Orders for special dimensions promptly handled. Write for complete information.

180-A

UNIVERSAL ENGINEERING CO.
FRANKENMUTH 5, MICHIGAN

For more details circle NED-209 H4 on enclosed inquiry slip

Get More Attention...
WITH
DAV-SON
INDUSTRIAL
BULLETIN
BOARDS

QUICK CHANGE LETTER BOARDS for any message *you want, when you* want it. Get quick acceptance of plant programs, drives, safety news, etc. Flash BIG, Bold Headlines on durable, economical changeable letter boards. Many sizes, styles available.

Genuine Cork-Back boards with amazing self-sealing cork for quick posting of letters, photos, posters, etc. Walnut finish hardwood frame, mitered and glued, or sturdy metal frames. Available with or without locking glass doors. Wide variety of sizes.

REMEMBER . . . A Dav-Son Board for every purpose—in plant, office, warehouse.

WORLD'S LARGEST SELECTION. 100 DIFFERENT SIZES AND STYLES TO CHOOSE FROM

- Changeable Letter
- Genuine Cork-Back
- Indoor and Outdoor
- Metal or Hardwood Frames
- Special Safety Displays
- With or Without Locking Glass Doors
- Illuminated and Non-Illuminated
- Single and Multiple Panels

Write for Complete Information Regarding Your Requirements. If Your Dealer Cannot Supply—Order Direct

DAV-SON
A. C. DAVENPORT & SON, INC.
DEPT. NE
311 N. DESPLAINES ST. • CHICAGO 6, ILL.

INSIST ON DAV-SON—YOUR BEST BUY!

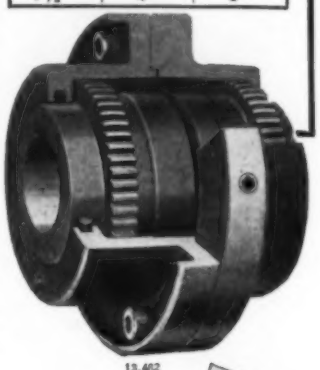
For more details circle NED-210 H4 on enclosed inquiry slip

Now you can choose a smaller, lighter, lower-cost coupling

New LINK-BELT Geared Flexible Couplings have greater bore capacity than other makes

Approx. outside dia. (in.)	Max. bore of Link-Belt coupling (in.)	Largest bore available in most leading makes (in.)
4-9/16	1½	1⅜
6	2⅛	1½
7	2¾	2
8⅜	3½	2½
9½	4	3

With no sacrifice of load capacity, the new Link-Belt Geared Flexible Coupling is designed to accommodate a larger shaft for a given outside diameter. That means you can often apply it where radial clearances are too close for other makes. What's more, the Link-Belt design provides for parallel and angular misalignment with minimum backlash. Get all the facts from your Link-Belt sales office or distributor. Or write for Folder 2375 to Link-Belt Company, 220 S. Belmont Ave., Indianapolis 6, Ind.



LINK-BELT
GEARED FLEXIBLE COUPLINGS

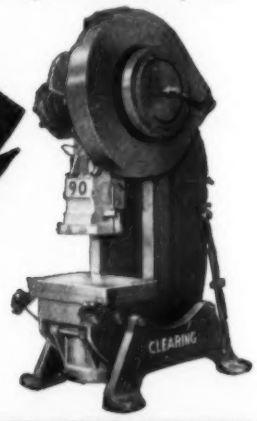
▲ For more details circle **NED-211 H4** on enclosed inquiry slip ▲

We've taken the delay out of O.B.I. delivery

A New Clearing Manufacturing Policy

Here is another Clearing first. Presses manufactured in advance of sale! Clearing inclinables in practically every capacity are now immediately available for shipment upon order. This time-saving manufacturing and sales policy has been undertaken by Clearing Machine Corporation to take the lag out of delivery.

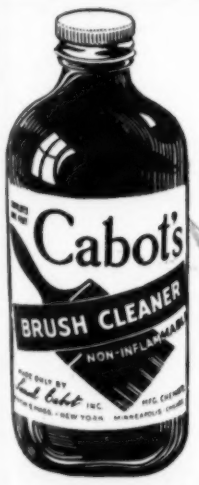
If you have been considering the purchase of an O.B.I. press, take advantage of this new production and delivery policy. Get in touch with Clearing by mail or telephone today.



CLEARING MACHINE CORPORATION
6494 WEST 65TH STREET • CHICAGO 38, ILLINOIS
HAMILTON DIVISION, HAMILTON, OHIO

▲ For more details circle **NED-212 H4** on enclosed inquiry slip ▲

specify...Cabot's



USE **over and over** AGAIN!

Cabot's BRUSH CLEANER

- **Cleans hardened brushes thoroughly!**
- Won't evaporate! • Non-inflammable!
- Safe for finest bristles!

See for yourself how easy it is to restore your costly paint brushes to useful service.

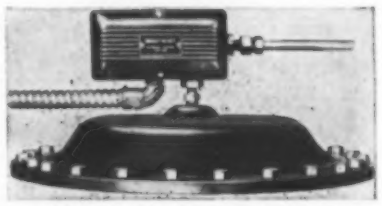
Samuel Cabot

Write for free sample today.

SAMUEL CABOT INC.
832 Oliver Bldg., Boston 9, Mass.

▲ For more details circle **NED-213 H4** on enclosed inquiry slip ▲

POWER RELAY
eliminates pneumatic system lags



Incorporation of the Autronic type P2R power relay in pneumatic systems makes it possible to use low cost, flexible air-operated valves without the transmission lags. The electron-pneumatic transducer, designed to operate with the Swartwout Autronic control system, takes electrical output from the Autronic controller or manual control and converts it to an air-loading pressure proportional to the electric current. Unit is made for various air pressures from 3 psi and can be used either reverse or direct-acting. Made by **Swartwout Co.**, 18519 Euclid Ave., Cleveland 12, O.

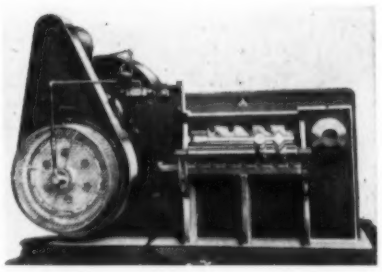
▲ For more details circle **NED-214 H4** on enclosed inquiry slip ▲

COLD CATHODE LIGHTING
components have 25,000-hour life

Low brightness industrial cold cathode lamps feature absence of direct and reflected glare and low maintenance costs. Complete system of lamps, fixtures and ballasts is rated at 25,000 hours. Midpoint cut-out ballast permits the cold cathode to show lumen efficiencies comparable to hot cathode exposed lamps. Range of colors, instant starting, lack of radio or electronic interference and dimming effects are other features. Made by **CELine, Inc.**, 222 N. Fourth St., St. Charles, Ill.

▲ For more details circle **NED-215 H4** on enclosed inquiry slip ▲

BILLET SHEAR
mounts 36-in. long knives



Leverage principle employed by the Canton billet shear for production cutting of metals in rounds, squares, flats, angles, channels, I-beams and special shapes makes possible heavy cuts with small input of power. Shear will mount 36-in. knives, but where high production of one size of material is common, shorter 10½-in. blades can be used. Lever arm is cast steel and bed is welded steel plate. Many standard Canton Alligator shear parts and standard air clutch of Canton stop-motion shears can be used. Made by **Hill Acme Co.**, Canton Div., 1211 W. 65th St., Cleveland 2, O.

▲ For more details circle **NED-216 H4** on enclosed inquiry slip ▲

BARBER COLMAN

Barcol® Radio-Controlled
OVERdoors
operate from moving vehicle

To speed plant traffic or save heat, use Barcol door controls . . . truck operators can open and shut doors by radio without stopping. Also available with pull-cords or convenient wall switches. Exclusive cam closing action on your Barcol OVERdoor assures weather-tight fit yet easy operation. Barber-Colman also makes operators for swinging or sliding doors and sliding gates. Installed, guaranteed and serviced by your Barcol distributor. Look under "Doors" in phone book.

BARBER-COLMAN COMPANY, DEPT. S48, ROCKFORD, ILLINOIS

▲ For more details circle **NED-217 H4** on enclosed inquiry slip ▲

50 Packers at Belknap Hardware Can't Be Wrong About BOXER

Men who do the packing at Belknap Hardware and Manufacturing Company in Louisville, Kentucky can tell you about the on-the-job advantages of BOXER!

Like many companies faced with small carton closing problems, Belknap Hardware reports better packaging at lower cost. Says Mr. Charles A. Gage, Vice President:

"We have fifty packers using your BOXERS. They are practically unanimous in preferring the BOXER way. They say it's faster, cleaner, neater than our former method."

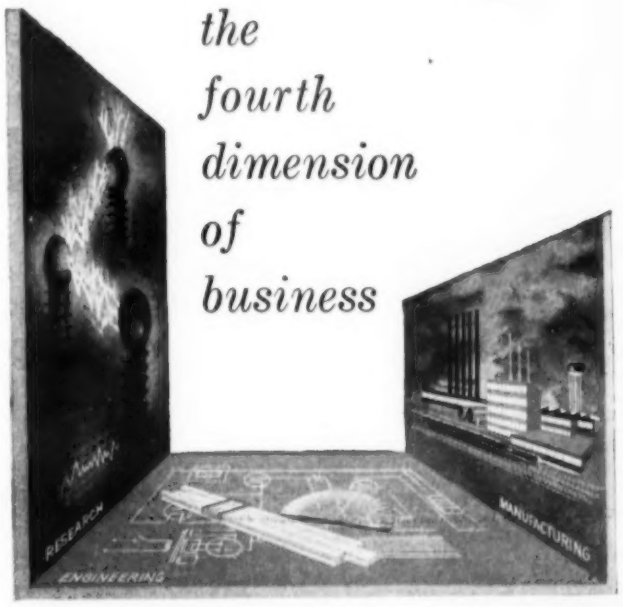
Get the facts on BOXER savings . . . BOXER speed . . . BOXER efficiency. Send for Bulletin B/101.

the Royal Family of Packaging **International Staplers**

International Staple & Machine Company 802 East Herrin St., Herrin, Ill.

▲ For more details circle **NED-218 H4** on enclosed inquiry slip ▲

Service



Here, at the Scintilla Division of Bendix, the word SERVICE is much more than the name of a department. It is a vitally important part of our over-all operations. Together with Research, Engineering and Manufacturing—Service might well be termed the fourth dimension of our business.

To implement this policy of following through to see that every customer gets the full performance built into each product, the Scintilla Division has a world-wide service organization backed up by factory-trained service men strategically located to meet service emergencies.

Service data, covering installation, operation and repairs as well as adequate distribution of parts, makes up a complete service program.

Just another reason why the name Bendix has become "The Most Trusted Name in Ignition."

Bendix

SCINTILLA DIVISION
OF **Bendix** AVIATION CORPORATION
SIDNEY, NEW YORK

Export Sales: Bendix International Division, 205 East 42nd St., New York 17, N.Y.

Factory Branch Offices:
117 E. Providencia Avenue, Burbank, California • Brouwer Building, 176 W. Wisconsin Avenue, Milwaukee, Wisconsin • Stephenson Building, 6560 Cass Avenue, Detroit 2, Michigan • 512 West Avenue, Jenkintown, Pennsylvania • 8401 Cedar Springs Rd., Dallas 19, Texas • American Building, 4 South Main Street, Dayton 2, Ohio

▲ For more details circle **NED-219 H4** on enclosed inquiry slip ▲

WATCH OUT, ALFONSO. ONE TUMBLE'S ALL IT TAKES...

Indifference can quickly spoil a hard won reputation for quality performance. You don't take chances when you stick to a solder you know and trust... time-proved Kester Solder, constant in solder alloy and always consistent flux formulae.

WRITE TODAY for Kester's *NEW* 78 Page Informative Textbook, "SOLDER . . . its fundamentals and usage"

KESTER

SOLDER COMPANY

4249 Wrightwood Avenue • Chicago 39, Illinois

Newark 5, New Jersey • Brantford, Canada

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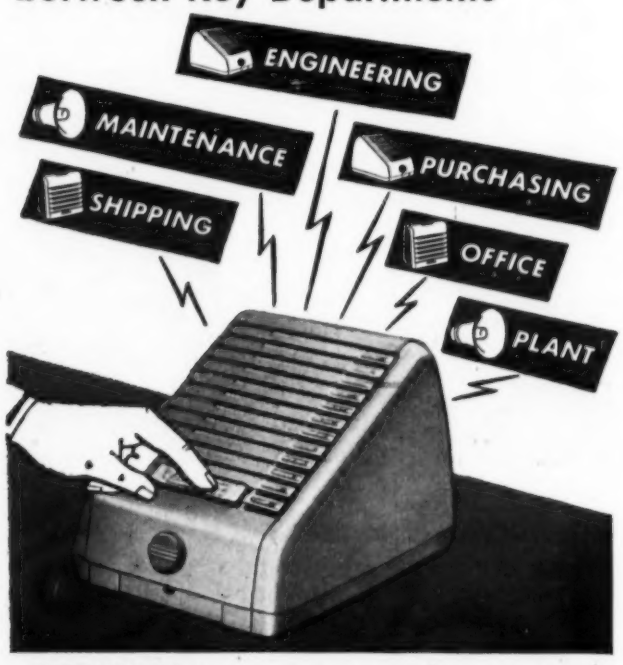
Step Up Production

with faster communication between Key Departments



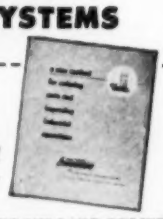
EXECUTONE Intercom puts every department at your fingertips—*instantly!*

Production moves faster when you don't have to wait for information. With Executone you talk to any department, anywhere in your office or plant—*instantly!* No time lost running back and forth. No waiting on "busy" inside phones. You get more work done—*faster!*

In the NEW Executone voices are amazingly crisp and clear. Installed and serviced by Executone-trained technicians. Low cost Executone soon pays for itself in dozens of ways.

Executone

GET THE FACTS **INTERCOM SYSTEMS**



EXECUTONE, INC., Dept. H-2
415 Lexington Ave., New York 17, N. Y.

Without obligation, please send me full data on Executone Intercom. I am particularly interested in:

☐ INTER-OFFICE COMMUNICATION ☐ SWITCHBOARD RELIEF
☐ INTRA-PLANT COMMUNICATION ☐ INVENTORY CONTROL
☐ MATERIALS HANDLING CONTROL ☐ LOCATING PERSONNEL

Name.....Title.....

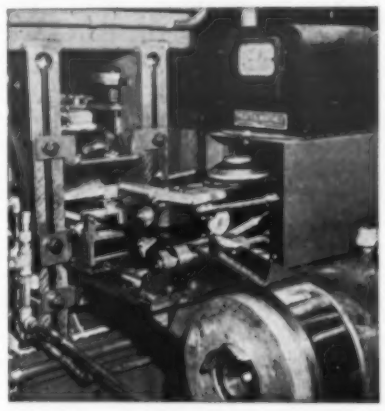
Firm.....

Address.....City.....

In Canada—331 Bartlett Ave., Toronto

▲ For more details circle **NED-221 H4** on enclosed inquiry slip ▲

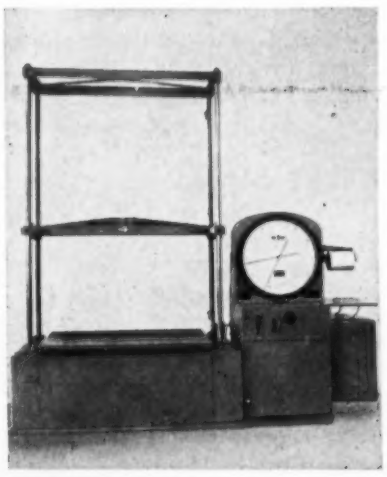
STRIP ROLLING & CONVERSION service offered for various metals



Facilities are available for immediate handling of reroll or conversion requirements for ferrous and nonferrous metals. Materials cold-rolled include copper, brass, phosphor bronze, beryllium copper, stainless steel, titanium and zirconium. Strip can also be slit, straightened, leveled and cadmium plated. Finished stock can be supplied in coils or straight lengths, with certain materials continuously or strand annealed. Sizes are governed by alloy and temper, with maximum starting limits being 0.090-in. thick and 5 in. wide. Finishing thicknesses run from 0.001 to 0.032-in., with minimum tolerances ranging from ±0.0001 to ±0.0005-in., depending upon thickness and materials. Service by **Penn Precision Products, Inc.**, Dept. NE, 501 Crescent Ave., Reading, Pa.

▲ For more details circle **NED-222 H4** on enclosed inquiry slip ▲

SPRING TESTING MACHINE 10,000-lb unit has mechanical recorder, tests 72-in. specimen



Accurate compression testing of spring assemblies up to 72 in. long is readily accomplished with this 10,000-lb spring testing machine which incorporates mechanical recorder. Electro-mechanically applied load is weighed by set of levers mounted under table in combination with Selectorange electronic indicating system. Even eccentric test loads can be weighed. The three test ranges can be changed any time during test.

Loading speeds from 0.025 to 8 ipm are maintained by variable speed drive. Clearance between screws is 60 in. Full 20-in. movement of specimen is indicated 1:1 on recorder chart which has 20 in. circumference. A 2:1 gearing arrangement is also provided, which is equivalent to six testing ranges on recorder. Made by **Tinius Olsen Testing Machine Co.**, 1072 Easton Rd., Willow Grove, Pa.

▲ For more details circle **NED-223 H4** on enclosed inquiry slip ▲

HEAT UP STEAM UNITS in 1/8 the TIME

...WITH **HEAT-KWIK** STEAM TRAPS YOU GET

- faster heating up
- more production
- lower steam consumption
- longer trap life
- reduction in trap capacity factor

V. D. ANDERSON COMPANY
1958 West 96th Street
Cleveland 2, Ohio

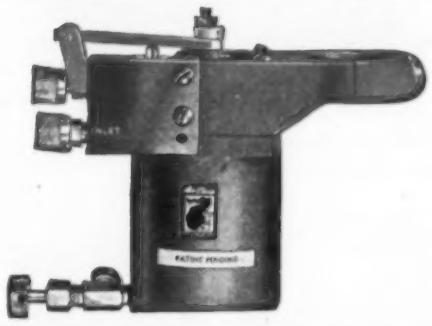
Heat-Kwik

FREE CATALOG
New brochure on Heat-Kwik steam traps shows how you can save hundreds of dollars for your plant. Write for free copy.

Super-Silver Top Steam Traps

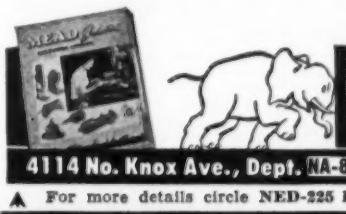
▲ For more details circle **NED-224 H4** on enclosed inquiry slip ▲

DOUBLE YOUR DRILL PRESS OUTPUT FOR $35



USE A NEW MEAD PNEUMATIC DRILL PRESS FEED FOR DRILLING REAMING TAPPING

This simple, inexpensive device quickly converts standard drill presses into semi-automatic machines — increases production substantially on suitable jobs; double or more in some cases.
Clamps to spindle quill in a few seconds. Automatically closes air fixture on work. Adjustable feed control and break-through cushion. Quick return. Easy to synchronize with automatic cycle equipment.
Air-Power does it quicker, cleaner, better.
Write today for latest complete catalog.

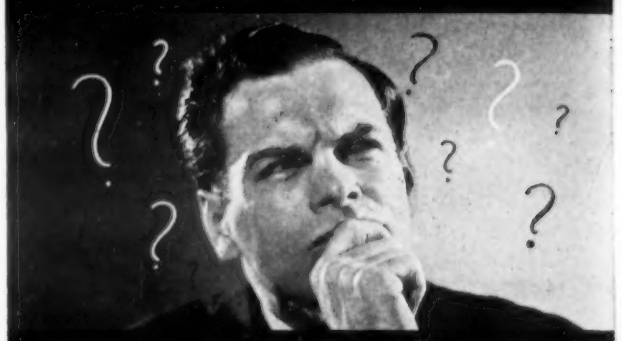


MEAD SPECIALTIES COMPANY

4114 No. Knox Ave., Dept. NA-84, CHICAGO 41, ILLINOIS

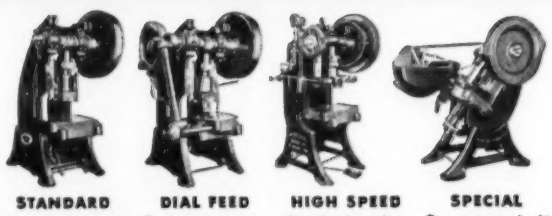
▲ For more details circle **NED-225 H4** on enclosed inquiry slip ▲

GOT PRESSROOM PROBLEMS?



Solve 'em with

FEDERAL Open back Inclinable **PRESSES**



STANDARD Non-repeat clutch—18 to 80 ton sizes—in geared or flywheel type.

DIAL FEED Fast, accurate, safe—18 to 80 ton sizes—geared or flywheel type.

HIGH SPEED Air clutch—electro-pneumatic controls—in 18 to 80 ton sizes.

SPECIAL Capscrew, bolt trimming and extruding presses—26 to 65 ton sizes.

Write for New Catalog No. 13 / THE FEDERAL PRESS COMPANY 506 Division St., Elkhart, Indiana

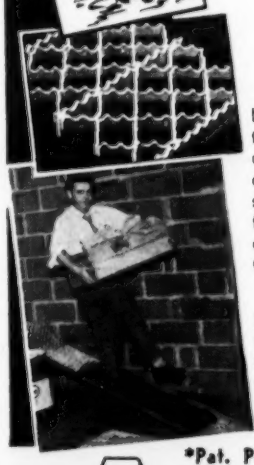
▲ For more details circle **NED-226 H4** on enclosed inquiry slip ▲

THE FIRST TRULY ENGINEERED SAFETY GRATING SOLVES SKIDDING PROBLEMS

Positive Footing

Bustin FIRM-GRIP

- Cuts Down Accidents
- Eliminates Danger Spots
- Improves Efficiency



No other serrated grating gives you all the features of Bustin FIRM-GRIP. Its unique assembly and engineered spacing of contact points results in an absolutely safe, easy-on-shoes and to-stand-on, full foot support treading surface, even when completely submerged in grease. FIRM-GRIP does not grab or drag under foot.

This positive footing multi-feature safety grating specialty ends skidding and slipping accidents cuts down insurance costs and raises all-around plant efficiency. ***Where other grating products fail . . . try BUSTIN FIRM-GRIP for positive results.***

*Pat. Pending

Bustin Write for Complete Literature FIRM-GRIP GRATING CORP.

Dover, New Jersey Dover 6-8800

"BUSTIN—Designers and Manufacturers of Metal Products Since 1928"

▲ For more details circle **NED-227 H4** on enclosed inquiry slip ▲

di-acro BOX FINGER BRAKE

1. Box and Pan Brake
2. Open End Brake
3. Standard Brake
4. Bar Folder

Form and duplicate a variety of shapes in metal as heavy as 16 gauge—widths up to 24"—with Di-Acro Brakes.

A number of forming jobs can be done with the Di-Acro Box Finger Brake, by simply adjusting or changing the type of mounting bar on contact surface. Di-Acro Standard and Radius Brakes are also available. Ten models.

Write for Free 32-Page Catalog

di-acro PRECISION METALWORKING MACHINES

O'NEIL-IRWIN MANUFACTURING CO.
354 8th Ave., Lake City, Minn.

For more details circle NED-228 H4 on enclosed inquiry slip

Here's BIG HELP IN TERMINAL WIRING!

The correct wire to correct terminal every time!

The New JONES FANNING STRIP

Connections are made through Fanning Strip, on bench or anywhere apart from barrier strip, and quickly slipped into assembly.

Designed for use with Jones Barrier Terminal Strips Nos. 141 and 142, for 1 to 20 terminals.

9-141 Barrier Strip

9-161 Fanning Strip. Pat. applied for.

Simplifies and facilitates soldering. Insures positive correct connections. Saves time. Ideal for harness or cable assembly. Strong construction: Brass terminals, cadmium plated. Heavy bakelite mounting.

Send for complete data on this new basic improvement!

Jones HOWARD B. JONES DIVISION
CINCH MANUFACTURING CORPORATION
CHICAGO 24, ILLINOIS
SUBSIDIARY OF UNITED-CARR FASTENER CORP.

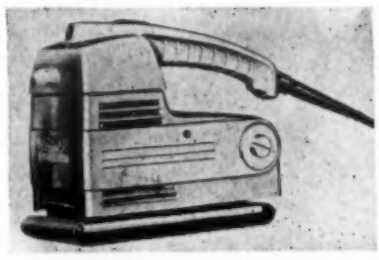
For more details circle NED-229 H4 on enclosed inquiry slip

SINTERED BEARINGS
groove prevents deposit buildup

Sintered graphited bearings for fractional horsepower electric motors, appliances, textile equipment and automotive equipment are now offered with groove running length of bearing. Groove is of narrow comparative width, but as deep as bearing wall thickness allows. This design prevents buildup deposits which otherwise would finally bind bearing on the shaft. Groove catches these deposit solids, while bearing surface remains clean and oiled with protective film. Made by **Wakefield Bearing Corp.**, Wakefield, Mass.

For more details circle NED-231 H4 on enclosed inquiry slip

RECIPROCATING ELECTRIC SANDER
capable of 14,400 strokes/minute



Reciprocating - type Syncro 900 electric sander is heavy duty unit capable of 14,400 strokes per minute. Vibration-absorbing handle floats in rubber. Detachable work light illuminates work in out-of-the-way places. Sander uses one-third of standard 9 x 11 in. sandpaper sheet. It is offered with lambswool polishing pad, "How to Sand" booklet, three sheets each of 320, 180, 80 and 50 grit aluminum oxide sandpaper for wood or metal and an auxiliary handle for easy vertical sanding. Made by **Syncro Corp.**, Dept. NED-54, Oxford, Mich.

For more details circle NED-232 H4 on enclosed inquiry slip

SOLDERING GUN
reaches working heat in 2½ seconds

Weighing only 1½ lb and balanced for long use without tiring, the model 199 Quick-Hot electronic soldering gun can be used for light production and maintenance work. It operates on 110-120 v 60-cycle ac and reaches working heat 2½ seconds after the trigger is pressed. A spotlight illuminates the work. Tool has a long nose tip, plastic handle and case that are heat and shock resistant. Made by **Wen Products, Inc.**, 5808 Northwest Highway, Chicago 31, Ill.

For more details circle NED-233 H4 on enclosed inquiry slip

For more details circle NED-234 H4 on enclosed inquiry slip

How a 'Sexauer' Easy-Tite faucet washer costing pennies can save you $115.22 a year!

A tiny, 1/32" faucet leak wastes 95,040 gallons—*$24.14* worth*—of water yearly.

Hot water leakage is even costlier . . . Fuel waste adds upward to *$91.08*** more to the loss. Total down the drain: *$115.22.*

And this is the dollar loss caused by only *one* pinpoint leak!

Fuel Waste		Water Waste	Total Waste
Oil (792 gals.)	**$91.08	$24.14	$115.22
Coal (9,879 lbs.)	88.91	24.14	113.05
Gas (84,411 cu. ft.)	84.81	24.14	108.95

*Water costs (figured at $1.90 for 1,000 cu. ft.) authenticated by Hackensack Water Co. **Fuel costs authenticated by American Gas Association.

Save money; cut costs; stop leaks with dependable 'Sexauer' Easy-Tite faucet washers.

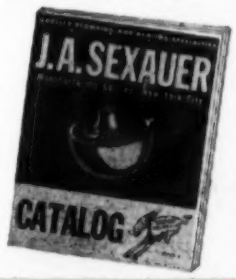
Built like a tire with Fiberglas reinforcement

Easy-Tite faucet washers are made of a special du Pont product, instead of rubber, and reinforced with Fiberglas. The result is a washer that resists the closing squeeze that splits and mushes ordinary washers. And Easy-Tites withstand destructive heat (up to 300° F. by test). These features explain why *'Sexauer' Easy-Tites outwear ordinary faucet washers 6 to 1!*

By avoiding labor on those 5 additional repairs, Easy-Tites cut today's high maintenance costs 83⅓%! But Easy-Tites not only save water, fuel, labor; they also prolong the life of expensive fixtures.

FREE CATALOG—Easy-Tite faucet washers are just part of the line of over 3000 'Sexauer' Triple-Wear plumbing repairs parts and patented precision tools.

Get complete information on Easy-Tites and other cost-cutting 'Sexauer' materials. Send for our FREE, new 118 page Catalog H. Fill in and mail the coupon today.



J. A. Sexauer Mfg. Co., Inc. Dept. AU- 84
2503-05 Third Ave., New York 51, N. Y.

Gentlemen: *Please send me a copy of your FREE, new 118 page Catalog H.*

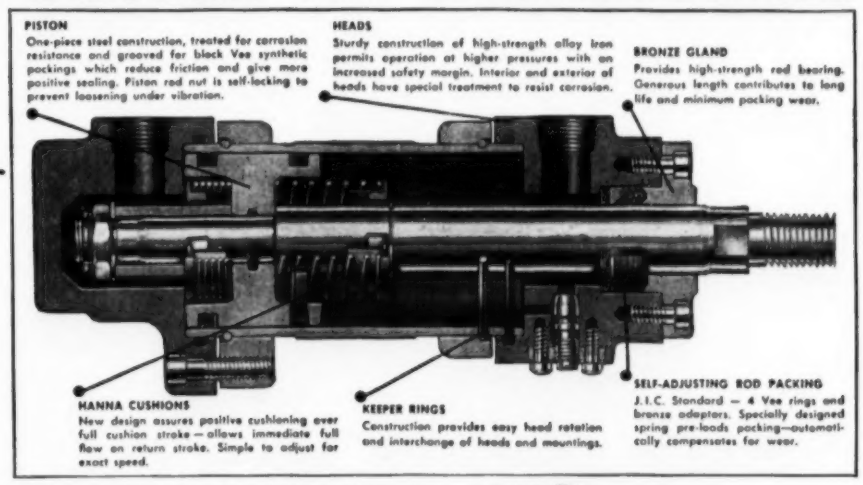
My name.....Title.....
Company or Institution.....
Street.....
City.....Zone.....State.....

SEXAUER
WORLD'S LEADING SPECIALISTS IN PLUMBING AND HEATING REPAIR PARTS

For more details circle NED-235 H4 on enclosed inquiry slip

Completely New in DESIGN and ENGINEERING

HANNA Fluid Power 750 SERIES CYLINDERS



■ We didn't design these cylinders with a "new look" in mind—although they have it. What's most important to you is their new performance . . . new operating features . . . new versatility. The cross-section points out just some of the new features. Others are: ground, polished, chrome-plated rods of alloy steel; cold drawn brass cylinder tubes; cushion adjustment dials; large fluid passages; and J.I.C. Standard leak-proof "O" ring gaskets.

You will like the greater power developed from dimensionally smaller units in the Hanna "750" Fluid Power line. Because of their broad capacity range, air up to 250 psi and hydraulic up to 750 psi, you'll be sure of smooth, dependable and lasting operation in the medium pressure ranges.

Inside and outside, Hanna "750" Fluid Power Cylinders are truly new. Together with their proved companions, Hanna LP and Hanna HP Cylinders, they offer a complete range of capacities, sizes and mounting styles to suit your requirements. For details, ask your Hanna Representative (see your classified telephone directory), or write for the new Catalog. No obligation.

Write for this new Hanna Catalog No. 750

Hanna Engineering Works
1759 Elston Avenue - Chicago 22, Illinois

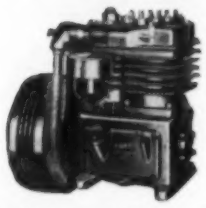
For more details circle NED-230 H4 on enclosed inquiry slip

GET MORE PRODUCTION PER MAN HOUR

with the Help of Dependable Efficient

Curtis

Air Compressors



Available up to 320 cu. ft. Can be supplied base mounted up to 50 H.P. or tank mounted up to 15 H.P. Timken bearing equipped . . . precision built.

Air Cylinders and Hoists

To lift, lower, push, or pull

Pendant air hoist is ideal for lifting or lowering—Bracketed Air cylinder can be mounted in any position for lifting, lowering, pushing or pulling.

For more information write to:

CURTIS PNEUMATIC MACHINERY DIVISION of Curtis Mfg. Co.
1979 Kienlen Avenue • St. Louis 20, Missouri 764

100 Years of Successful Manufacturing Experience

▲ For more details circle NED-238 H4 on enclosed inquiry slip ▲

WESTON *miniature* ELECTRICAL RECORDER

EXTREME COMPACTNESS . . . CORMAG® SELF-SHIELDING MECHANISM . . . A-C AND D-C MODELS

Employing the Weston CORMAG mechanism, this new recorder combines a high degree of shielding with new compactness and light weight. For example, the magnetic field created by a conductor carrying 15,000 amperes at a distance of 3 feet would cause a temporary error of less than 1 per cent. Overall size is only 6¾" x 6¼" x 7" deep; chart size 4" dia.; weight only 1½ lbs.

It's the ideal instrument for recording ampere-hour demand—checking overloads or unbalanced conditions—monitoring radio detectors—recording current and duration in electroplating and metal refining—recording speeds—making life tests on batteries, lamps, etc.

Available in required ranges for A-C or D-C voltage or current measurement needs. Also furnished with bracket for wall mounting; and with flange case for flush panel mounting. Bulletin available giving complete specifications and prices . . . WESTON Electrical Instrument Corporation, 614 Frelinghuysen Avenue, Newark 5, New Jersey. 7673

WESTON *Instruments*

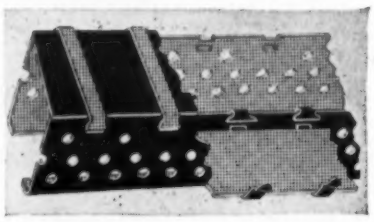
▲ For more details circle NED-239 H4 on enclosed inquiry slip ▲

NAME PLATE of etched metal and enamel

Permanent pressure-sensitive adhesive is used to affix Foilcal etched metal and enamel name plate. It withstands temperatures from −58 to 257° F; resists abrasion, fungus, oil, salt spray and color fading; and will adhere to any smooth clean surface. Name plates may have raised or sunken letters, or combination, and single or multiple colors. Free sample packet available on request to **Miller Dial & Name Plate Co.**, Dept. NED, 4400 N. Temple City Blvd., El Monte, Calif.

▲ For more details circle NED-240 H4 on enclosed inquiry slip ▲

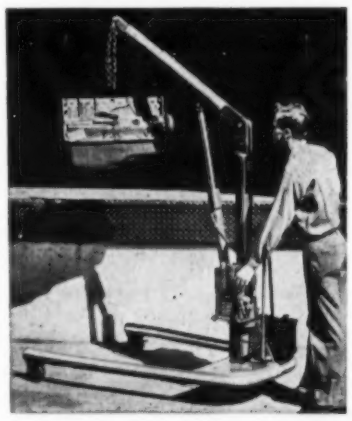
WIRING DUCT clips serve as hinges for covers



Safety cover clips designed for Panel-Chanel plastic wiring ducts (*NED, Mar.* '54) provide postive locking of cover to duct, yet allow covers to be swung back with hinge action to expose wiring. Channel covers do not have to be removed from panel, and need for unlacing wires is eliminated. Clips are inserted through slots in sides of channel, and covers are press-fitted to clips. Made by **Stahlin Brothers Fibre Works, Inc.**, 1900 Maple St., Belding, Mich.

▲ For more details circle NED-241 H4 on enclosed inquiry slip ▲

UTILITY HOIST hydraulic system is battery powered



Hydraulic system of this electrically powered hydraulic Utility hoist is rated at 5000 psi, sufficient to provide power to lift 1000 lb load 8 ft with built-in boom extension or a 2000-lb load 4 ft. Unit's 6-v motor is battery powered. Crane is readily converted from a mobile shop hoist to a truck bed or loading dock mounting. Battery type conversion kit is available for powering existing manual hoists. Made by **Unit Mfg. Co.**, Dept. 124, 1229 Harmon Pl., Minneapolis 3, Minn.

▲ For more details circle NED-242 H4 on enclosed inquiry slip ▲

4 WAY MIXING ACTION PRODUCES HOMOGENEOUS BLENDS... Reduces Mixing Costs—

with the

STURTEVANT BLENDER

Four separate mixing actions in the Sturtevant Blender assure complete blending of various materials regardless of weights, densities, finenesses, or other physical properties.

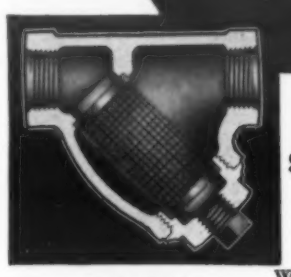
This mixing action provides a thoroughly blended product with no substances floating to remain unmixed.

Sturtevant Blenders are available in mixing capacities from 500 to 20,000 pounds. Write for information or engineering assistance.

STURTEVANT MILL COMPANY
114 CLAYTON STREET, BOSTON 22, MASSACHUSETTS
Designers and Manufacturers of
CRUSHERS • GRINDERS • SEPARATORS • CONVEYORS • MECHANICAL DENS and EXCAVATORS • ELEVATORS • MIXERS

▲ For more details circle NED-243 H4 on enclosed inquiry slip ▲

don't let dirt damage your piping!



CRANE SEDIMENT SEPARATORS COST SO LITTLE

Iron Body and Cast Steel
•
Working Pressures
Up to 600 pounds steam. Iron patterns in sizes up to 12-in. Steel patterns to 1½-in. Screwed or Flanged Ends.

Why take chances with valuable and sensitive flow control equipment? Put Crane Sediment Separators in your pipe lines and be sure dirt, grit and scale can't do damage.

Simple in design; rugged in construction. Have extra large screening area assuring free fluid flow with minimum pressure loss. Effectively trap all foreign matter. Periodic blowing out is only maintenance required. Get full details from your Crane Catalog or call your Crane Representative.

CRANE CO., 836 S. Michigan Avenue, Chicago 5, Ill.
Branches and Wholesalers Serving All Industrial Areas

CRANE *Everything for Every Piping System*

VALVES • FITTINGS • PIPE • PLUMBING AND HEATING

▲ For more details circle NED-244 H4 on enclosed inquiry slip ▲

BACKED UP by GEARS FROM STOCK

Even when you specify such phenomenally long life gear sets as Cone-Drive double enveloping gearing, it helps to know that if you ever need replacements you can get them *—from stock!*

Make sure of that by specifying *STANDARD* Cone-Drive gear sets and reducers.

They will also give you these "plus" advantages:

- **Smaller center distances**
- **Up to 2/3 less weight**
- **More teeth in contact**
- **Lower overall cost**

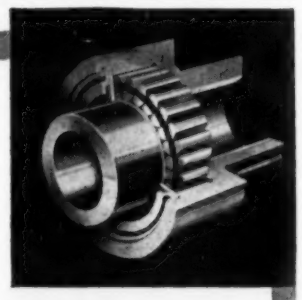
STANDARD Cone-Drive gear sets come in ratios from 5/1 to 70/1; will handle loads from fractional to over 800 hp. Write for specifications.

CONE-DRIVE GEARS *Division, Michigan Tool Company*
DOUBLE ENVELOPING GEAR SETS & SPEED REDUCERS 7171 E. McNichols Road • Detroit 12, Michigan

▲ For more details circle NED-245 H4 on enclosed inquiry slip ▲

for

OVER-RUNNING, BACKSTOPPING, INDEXING:



WHY SPECIFY A CLUTCH WITH LESS THAN MAXIMUM TORQUE CAPACITY?

You're assured a full complement of torque capacity when you specify today's modern clutch design. The Formsprag Clutch, with a full complement of sprags, provides more capacity in less unit space than any other clutch. You're assured long life too: an infinite number of changing contact points prevents excessive wear. Design simplicity permits rebuilding—three times. For more facts, write for this 10-page folder of descriptive engineering data, on your letterhead please.

DISTRIBUTORS IN PRINCIPAL CITIES

FORMSPRAG COMPANY
23595 Hoover Road • Van Dyke, Michigan

FULL COMPLEMENT

FORMSPRAG *Clutches*

▲ For more details circle NED-246 H4 on enclosed inquiry slip ▲

SELLSTROM SCARFING MASK
designed to fight heat

The foundry "cleaners" who cut off the gates and risers, and the steel mill "scarfers" who scarf the almost red-hot castings with acetylene torches, are deserving of real protection against the intense heat to which they are continually subjected.

The No. 194 Sellstrom Scarfing Mask here illustrated is ideal for this purpose.

1. It is designed to keep the intense heat away from the face, nose, forehead and chin.

2. Felt on the inside of the nose piece offers an abundance of ventilation while at the same time it prevents breathing in the extreme heat. This is accomplished by a heavy piece of felt on the inside of the nose piece. This is an important new innovation in scarfing masks.

3. The Scarfing Mask is fabricated from sturdy fibre, has the standard Sellstrom adjustable headgear and can be fitted with 50 m/m lenses of any required density.

Ask your dealer about the Sellstrom No. 194 Scarfing Mask. If he cannot supply you, write us direct for additional information. Or better still, let us forward a sample Scarfing Mask on memo for your inspection. **Sellstrom Manufacturing Company,** 654 North Aberdeen Street, Chicago 22, Illinois. —*Advt.*

▲ For more details circle **NED-247 H4** on enclosed inquiry slip ▲

Allis-Chalmers 20-kw Induction Heater shown with A-C designed and built work handling fixture.

IN PRE-PRODUCTION tests, this Allis-Chalmers Induction Heater annealed steel shell cases at the amazing rate of nearly 2 per second. Not only is this heating unit a fast worker, but it's a clean worker — and a cool one, too! It puts the heat into the metal where it belongs — holds down the ambient.

Whether your problem is annealing, hardening, brazing, or soldering, find out what an Allis-Chalmers Induction Heater can do for you. Standard ratings to 100 kw output are available. Call your nearby Allis-Chalmers office or write Allis-Chalmers, Milwaukee 1, Wisconsin. A-4405

ALLIS-CHALMERS

▲ For more details circle **NED-248 H4** on enclosed inquiry slip ▲

THE *Sutton* MOTOR DRIVEN PRESSURE BLOWER

THREE SIZES
¼, ½, 1 H.P.

USE FOR
- EXHAUSTING DUST SMOKE FUMES VAPOR
- FORGE BLASTING

CONVEYING COTTON, WOOL, SHAVINGS
COOLING AND DRYING

MADE OF LIGHTWEIGHT CAST ALUMINUM ALLOY. CENTRIFUGAL TYPE. Direction of discharge may be changed to any of eight 45 degree positions. Straight wall construction reduces windage and increases efficiency. Standard 3450 r.p.m. direct-connected 60-cycle ball bearing motor, open or totally enclosed types. Capacities, 100 to 800 cu. ft. per min. at static pressures from ½" to 6". Write for literature and prices.

Sutton *Manufacturing Corp.*
112 W. WILSON AVENUE NORFOLK, VIRGINIA

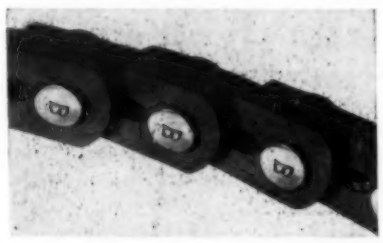
▲ For more details circle **NED-249 H4** on enclosed inquiry slip ▲

INDICATING SNAP GAGES
now have adjustable upper contacts

Line of 1340 single-purpose indicating snap gages now includes two models having adjustable upper contacts. Model P-20 has capacity of 0.062 to 0.625-in. and model P-21 has capacity of 0.625 to 1.250 in. Both have dial indicators graduated to 0.0001-in. Adjustments are made by sliding upper or reference contact along upper arm of gage. Movement of contact is transferred to indicator through friction-free integrated pantograph transmission. Wrap-around Pregwood handle insulates gage from heat of operator's hand, and self-centering backstop assures proper gaging position. Made by **Federal Products Corp.,** 1118NR1 Eddy St., Providence 1, R. I.

▲ For more details circle **NED-250 H4** on enclosed inquiry slip ▲

V-LINK BELTING
has improved stretch resistance



New rubber compound and fabric incorporated in Brammer Red detachable V-link belting offers high resistance to stretch. Improved belting also features high power capacity, good flexibility and resistance to shock, fatigue and abrasion. Size of belting is indicated on each rivet head. **Brammer Corp.,** Dept. NED, 684 Broadway, New York 12, N. Y.

▲ For more details circle **NED-251 H4** on enclosed inquiry slip ▲

MARKING MACHINE
stamps most round parts

Almost any size of round part such as tubing, bushings and collets can be stamped by GRD-950-1 marking machine. A geared handle causes the roller marking die to rotate against the part, held in position on an arbor. Various arbor sizes are available. Roller marking die can be either solid or insert type. Needle bearings are used throughout. Impression depth can be precisely adjusted, and after set-up, unit can be locked for run of parts. **M. E. Cunningham Co.,** 1055 Chateau St., Pittsburgh 33, Pa.

▲ For more details circle **NED-252 H4** on enclosed inquiry slip ▲

THE INSURANCE PREMIUMS YOU SAVE WILL PAY FOR THIS SAFETY FLOOR PLATE

When A.W. ALGRIP Abrasive Rolled Steel Floor Plate is installed in any plant, costly slipping accidents end and insurance premiums drop 'way down. ALGRIP assures non-slip foot safety in every step—even when wet or splashed with oil; gives a firm non-skid grip even on steep inclines.

Hundreds of tiny abrasive particles are impregnated *to a controlled depth of penetration* into each square foot of strong yet light weight steel plate. This exclusive ALGRIP feature provides a tough "grinding-wheel" grain that wear can't lick because heavy use only exposes new particles. And the insurance rates you save when accidents cease will pay for your ALGRIP installation.

Send today for full details on how non-slip fire-and breakage resistant ALGRIP can save money for you.

A.W. ALGRIP *Abrasive Rolled Steel Floor Plate*

ALAN WOOD STEEL COMPANY
CONSHOHOCKEN, PA.

Please send free booklet AL-4 on savings from safety with ALGRIP.

Name_____
Company_____
Address_____
City_____ Zone____ State____

▲ For more details circle **NED-253 H4** on enclosed inquiry slip ▲

HANSEN ONE-HAND TACKER 1001 USES

HERE'S A HANSEN TACKER (Model T-48) — powerful — compact — automatic — zip-zipping staples thru a rubber die on a printer-slotter. Only ONE of 1001 every-day uses where HANSEN tacks — FASTER — BETTER — AT LESS COST.

THIRTY-SIX MODELS — 80 staple sizes (some packed in convenient Vest-Kit) — for a wide range of uses in assembly, production, shipping. Modernize your tacking method!

A. L. HANSEN MFG. CO. REQUEST BOOKLET
5164 Ravenswood Ave., CHICAGO 40, ILL.

▲ For more details circle **NED-254 H4** on enclosed inquiry slip ▲

GENERAL INDUSTRIAL PNEUMATIC TIRES

WIDE-BASE design is the key to every wanted feature for more profitable material handling

SAVE TIME • MONEY • LABOR

- MORE LOAD CAPACITY AT LOW OR HIGH SPEEDS
- CUSHION EQUIPMENT AND LOADS REDUCING BREAKAGE AND SPILLAGE
- SAVE HIGH COST FLOORS AND FLOOR SURFACES
- SLOW, EVEN WEAR FOR LONG SERVICE
- HIGH FLOTATION FOR EASIER ROLLING OVER SOFT GROUND
- ROLLS EASIER, SMOOTHER OVER ALL SURFACES.

Available separately or in assemblies of Tires, Tubes and Wheels. Size O. D. 8" to 27"—200 to 4000 lbs. cap. for low or high speeds.

Rigid **CASTER FORKS** *Swivel*

Wide-base caster forks engineered to carry heavier loads without adding dead weight to equipment. Available in identical pairs in a wide range of sizes.

SEND FOR CATALOG... DEPT. 4

The GENERAL TIRE & RUBBER CO. Akron, O.

▲ For more details circle **NED-255 H4** on enclosed inquiry slip ▲

NEW Portable MULTIPLE OUTLET BOX

Toggle Switch Controlled • Signal Light Indicator

ONLY $8.30 LIST

A highly needed convenience for laboratories, workshops, offices and homes

CASE — 18 gauge steel supported on 4 rubber feet.

WIRING — 3 convenience outlets, one hot, 2 controlled by toggle switches rated 10 ampere at 125 volt, AC-DC. Red signal light illuminates when plugged in. 6 ft. SJ#16 two conductor rubber covered cord with molded rubber two-prong plug.

FINISH — Vista Green baked enamel. Black fittings and cord.

*WRITE for complete descriptive literature.

THE FOSTORIA PRESSED STEEL CORP.
FOSTORIA, OHIO

▲ For more details circle NED-256 H4 on enclosed inquiry slip ▲

Aluminum-painted oil tanks at Lever Brothers' soap, detergent, shortening and margarine plant, Edgewater, N.J.
Aluminum Paint: The Debevoise Company, Brooklyn, N.Y.

LEVER BROTHERS FINDS ALUMINUM PAINT MORE ECONOMICAL • MORE DURABLE MORE ATTRACTIVE

Lever Brothers Company uses aluminum paint for general outdoor painting of storage tanks, pipelines and structural steel because it has "better lasting quality and is, therefore, more economical than other paints. It is also a better appearing paint for the outdoors," they add.

Aluminum paint has proved to be unequalled for economy, durability and beauty. That's why you find it specified as the standard protective coating throughout industry.

ALCOA does not make paint, but ALCOA Aluminum Pigments are used in more aluminum paints than any other brand. Special formulas have been developed by your paint manufacturer to solve individual problems. Paints made to these formulas actually cost you less, last longer, give utmost protection against heat, cold, sun, rain, smoke and fumes. Write us today for FREE BOOKLET, *Painting with Aluminum.*

FREE BOOK full of ideas you can use

Contains important information on proper application and selection of aluminum paint. Answers many industrial painting questions.

Write for your free copy today.

PAINT SERVICE BUREAU
ALUMINUM COMPANY OF AMERICA
1788-H Alcoa Building
Pittsburgh 19, Pa.

ALCOA ALUMINUM

ALUMINUM COMPANY OF AMERICA

▲ For more details circle NED-257 H4 on enclosed inquiry slip ▲

LIGHT BEAM RELAY operates on pulsed light frequency

Modulated light beam Modulite relay operates on projected light pulsed several hundred times per second by a scanning disk with holes in outer edge. Receiver is tuned only to this frequency by RC circuits and peaked transformer coupling. Thus, unit cannot be triggered by ambient light changes or reflection, nor can it be "fooled" by a flashlight. Applications include door openers, press and shear safety guards, conveyor controls and intrusion alarms. Other features are water- and dust-tight steel case, low voltage light source, plug-in relay with 5-amp DPDT contacts, tilt and aiming adjustments, 2-in. pipe stand and infrared filter. Made by **Electronic Control Corp.,** 1571 E. Forest, Detroit, Mich.

▲ For more details circle NED-258 H4 on enclosed inquiry slip ▲

VIBRATION ANALYZER portable instrument weighs 38 lb

Portable model TIC vibration analyzer is a combination instrument for measuring amplitude and frequency of steady-state vibrations for the degree and frequency of out-of-balance conditions in rotating or moving mechanisms. It has six amplitude ranges and two frequency ranges. Relative phase angle connector for synchronous analysis, two pick-up connections, variable frequency oscillator for tachometer application, strobotron flash and front panel terminals for connecting oscilloscope are also furnished. Frequency meter can be calibrated either in cycles per second or revolutions per minute. Made by **Technical Instrument Co.,** Dept. A, 3732 Westheimer Rd., Houston, Tex.

▲ For more details circle NED-259 H4 on enclosed inquiry slip ▲

DO YOU KNOW? The engineering characteristics of all metals in the general engineering, heat-resisting, corrosion-resisting and wear-resisting classifications under which Meehanite castings are produced are quickly available on circular slide rule type calculator "Physical Specification Chart for Engineering Design." It is offered free by Meehanite Metal Corp., 714 North Ave., New Rochelle, N. Y.

▲ For more details circle NED-260 H4 on enclosed inquiry slip ▲

DERBY "152"

A DERBY FIRST
Stainless steel cut-off blade, guaranteed for life of machine.

MOST TALKED ABOUT GUMMED TAPE DISPENSER ON THE MARKET!

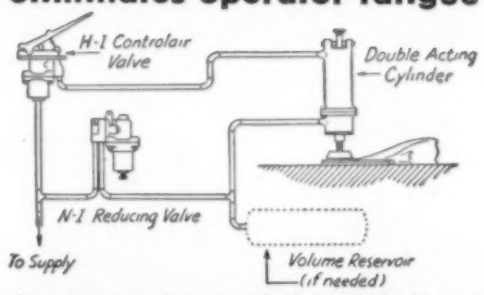
Derby spent 2 years designing, building and testing the fabulous Super "152". It's a rugged, efficient, gummed tape dispenser with so many big machine features, so many unusual Derby exclusives, that its low price is truly sensational! Dispenses 1" to 3" width tapes in predetermined lengths up to 30".

See your dealer or write Dept. NED

DERBY SEALERS INC. Derby, Conn.

▲ For more details circle NED-261 H4 on enclosed inquiry slip ▲

Pneumatic control eliminates operator fatigue



• An eastern manufacturer of ladies' pocketbooks wanted a better control system for his 15 small presses. He wanted a control that would apply light pressure to a pocketbook frame while the operator fitted material into the frame. Then, full pressure was needed to clinch the frame. A pneumatic system supplied by Westinghouse Air Brake Co. was the perfect answer.

The operator controls the pressure to the press with a Westinghouse foot-operated Controlair® Valve. He can select the exact force he needs; and both his hands are always free to work on the pocketbook. As a result, the work is less tiring for the operator; and he can work faster and more accurately. Scrap loss has been reduced.

Westinghouse pneumatic controls can give the same advantages on your machines. Write for information, or call the nearest Westinghouse Air Brake Distributor.

Westinghouse Air Brake COMPANY

INDUSTRIAL PRODUCTS DIVISION WILMERDING, PENNA.

Factory Branch: Emeryville, Calif.
In Canada: Canadian Westinghouse Co., Ltd., Hamilton, Ontario

▲ For more details circle NED-262 H4 on enclosed inquiry slip ▲

New WILLSON Kover-Mor goggles

with strong, light NYLON eye cups!

Style CW 70
For Welders — with Willson Spatterproof® cover glass over Willson-Weld® filter lens

STYLE CC 70
For Chippers—with Willson Super-Tough® lenses heat treated for extra protection

- New design provides ample room for large-frame prescription glasses
- Standard 50 mm. round lenses are easily replaced and quickly inserted
- Extra ventilation is provided by vents and ports safeguarded by screens
- Rigid metal top bar makes goggles easier to handle—more secure

Ask your Willson distributor for new Kover-Mor Welding Goggles —or write for new Bulletin.*

*Trademark

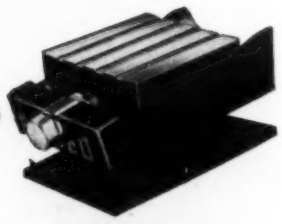
Over 300 safety products carry this famous trademark
WILLSON
Established 1870

WILLSON PRODUCTS, INC., 219 Washington Street, Reading, Penna.

▲ For more details circle NED-263 H4 on enclosed inquiry slip ▲

Improved Empco JACKS are stronger!

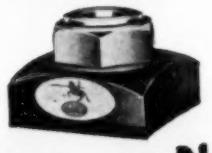
SAVE TIME SETTING UP AND LEVELING YOUR MACHINES WITH FAST, ACCURATE, SELF-ALIGNING LEVELERS!



Style JD Wedge type

You can meet hurry up demands for relocation of machinery quickly and easily with improved EMPCO JACKS. You just raise the machine enough to slip EMPCO JACKS under the base (the number depending on the size of the machine). Turn the adjusting screw up or down until the level indicator reads "zero," and the job's done.

To reduce vibration, VI-SORB mounting pads are available with each style EMPCO JACK. Write for specifications and prices today.



Style JS Screw type

EMPCO PRODUCTS

THE ENTERPRISE MACHINE PARTS CORPORATION
2727 JEROME AVENUE • DETROIT 12, MICHIGAN

▲ For more details circle NED-264 H4 on enclosed inquiry slip ▲

FLEXIBLE AS STRING . . . GLASS-CLEAR . . . FEATHER-LIGHT . . . FULLY RESISTANT TO ACIDS, ALKALIES, OILS, GREASES, AND WATERS . . . MIRROR-SMOOTH . . . TOUGH AS LEATHER . . . NON-OXIDIZING . . . NON-TOXIC . . . LONG-WEARING . . . FOR THE TRANSMISSION OF LIQUIDS, GASES, AND SEMI-SOLIDS.

TYGON Tubing is available in six standard compounds — continuous lengths — bores up to 2" ID — with or without outer braid reinforcement. Special compounds and sizes made to order.

Write, today, for detailed information and technical Bulletin T-77! 202C

U. S. STONEWARE
AKRON 9, OHIO
PLASTICS AND SYNTHETICS DIVISION

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standardize on standard

use it anywhere

HALLOWELL® CARRY-TOOL

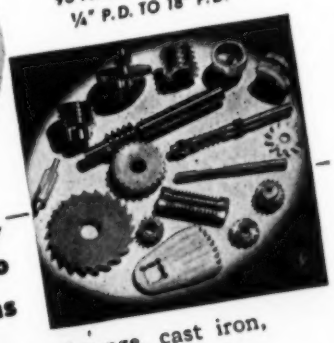
It's the most convenient carrier in the shop. Use it on assembly lines, at machines, in the toolroom. Use it for inspection, stockroom, maintenance, and mounting small tools. Drawers have ball bearing rollers and padlock attachments. Stocked and sold by industrial distributors. Write for literature. STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

HALLOWELL SHOP EQUIPMENT DIVISION sps JENKINTOWN PENNSYLVANIA

▲ For more details circle **NED-266 H4** on enclosed inquiry slip ▲

Abart GEARS

96 PITCH TO 5/7 D.P.
¼" P.D. TO 18" P.D.



QUALITY GEARS, precision-cut to your specifications

Available in steel, brass, bronze, cast iron, any metal and any non-metallic gear material. All gears are custom cut to specifications.

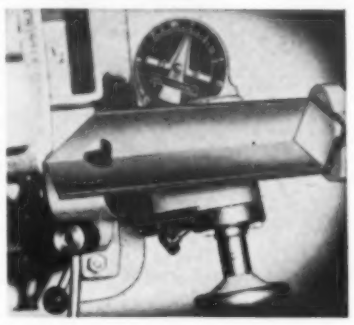
Spur Gears • Bevel Gears • Worms • Worm Wheels • Helical and Spiral Gears • Internal Gears • Sprockets • Finishing Machine Racks

Send blueprints and specifications (or samples) for quotations on above type gears, worm and worm wheels, or sprockets—any quantity.

Abart GEAR & MACHINE CO.
4826 WEST 16th STREET • CHICAGO 50, ILLINOIS
Mfrs. of Gears and Speed Reducers • BIshop 2-2524

▲ For more details circle **NED-267 H4** on enclosed inquiry slip ▲

CLEARANCE ANGLE GAGE
for use on drill grinders



Dial graduated for drill sizes from ⅛ to 2½ in. is incorporated in the clearance angle gage for Sterling drill grinders. Clearance angle selector, which shows 8, 10 and 12-degrees of clearance, is moved by a hand-wheel. Desired angle is lined up with the size of the drill being ground. Gage is standard equipment on Sterling model DA and DB drill grinders. Made by **McDonough Mfg. Co.**, Dept. N, 1550 Galloway St., Eau Claire, Wis.

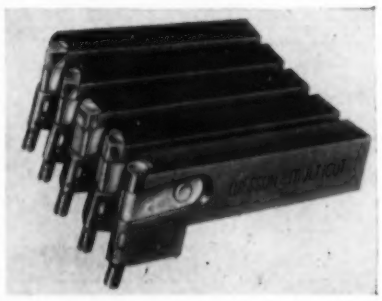
▲ For more details circle **NED-268 H4** on enclosed inquiry slip ▲

INDUSTRIAL SWEEPERS
additional models available in line

Wayne line of industrial sweepers has been broadened by the acquisition of Line Manufacturing, Inc. and its range of motorized sweepers. Consisting of five basic units, models range from 4.5 through 15 cu ft capacity. The Wayne line now covers a full range of sweeping equipment, from the smallest motorized type sweeper to the large 3 cu yd capacity street sweeper. Further information can be obtained from **Wayne Mfg. Co.**, 1203 E. Lexington Ave., Pomona, Calif.

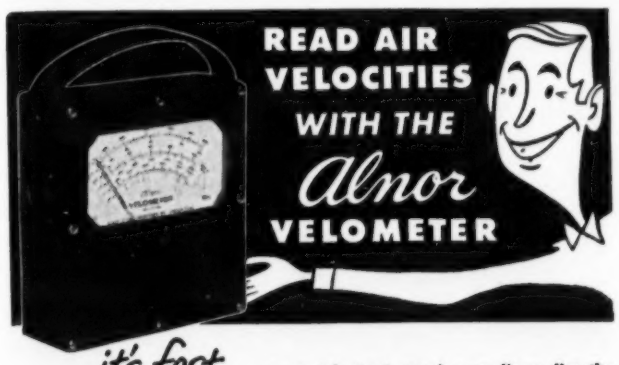
▲ For more details circle **NED-269 H4** on enclosed inquiry slip ▲

TOOL HOLDERS
height gage speeds insert setup



Resetting of inserts exactly on center is facilitated in these band type Multicut tool holders by precision carbide height gage permanently brazed to holder adjacent to insert slot. Insert is merely raised until it is flush with gage. Feeling by finger tip, it can be set accurately to 0.001-in. Elliptical slot facilitates easy insert removal, even if coolant and metal dust have become "baked" around insert. Made by **Wesson Co.**, 1221 Woodward Hghts. Blvd., Detroit (Ferndale 20), Mich.

▲ For more details circle **NED-270 H4** on enclosed inquiry slip ▲



READ AIR VELOCITIES WITH THE Alnor VELOMETER

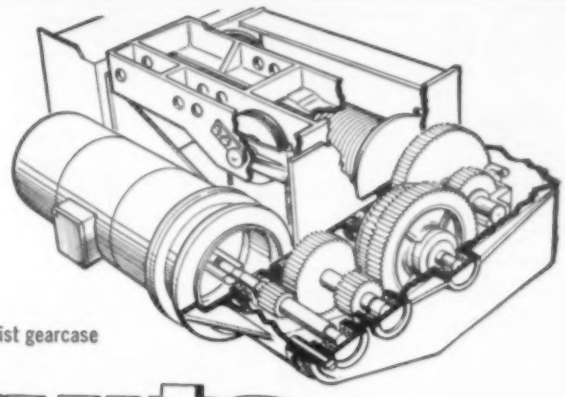
it's fast . . . you get instant, precise readings directly from scale face . . . no need for reference charts or calculations. Measure air flow through ducts, grilles, motors, spray booths, etc., or in the open.

it's accurate . . . brings laboratory standards of air velocity measurement to the production line, mine, mill . . . anywhere. Needs no special care or handling . . . anyone can use it and get accurate results.

it's portable . . . completely self-contained, hand-held. Rugged construction and sturdy case protect the Velometer from usual hazards of portable use. Available in scale ranges to 24,000 f.p.m. Wide selection of jets and fittings assures adaptability of Alnor Velometer to your application. Get full details and prices, write for Bulletin 2448-G. Illinois Testing Laboratories, Inc., Rm. 529, 420 N. La Salle St., Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

▲ For more details circle **NED-271 H4** on enclosed inquiry slip ▲



F2 hoist gearcase

guts FOR ACTION

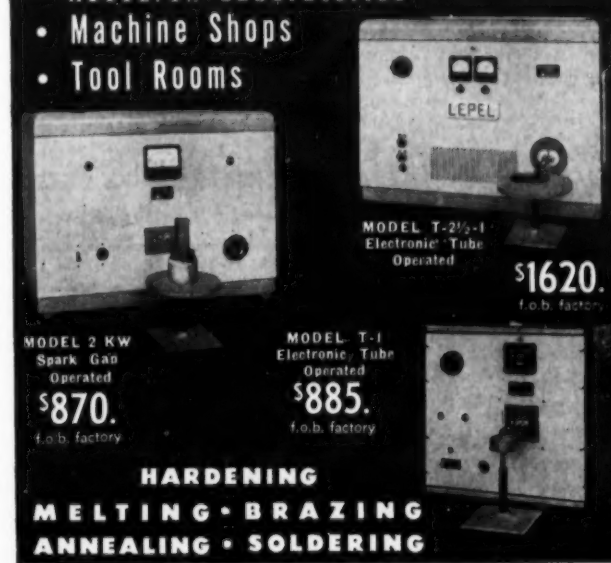
Robbins & Myers F hoists have just that! Not an ounce of fat or extra frill inside—engineered simplicity that cuts down time losses to zero. Search for cheap materials? Not here—Buy only the best—make parts precisely for the job. That's the procedure at R&M that saves you the high cost of compromise! *Capacities:* 1,000 to 20,000 lbs. *Hoist Speeds:* from 10 to 54 f.p.m. *Control:* Push Button or Pendent Rope. *Mounting:* Lug, push or hand geared trolleys, or choice of long or short radius powered trolleys. Write for Bulletins 801-C (hoists), 805-A (trolleys), 880 (2-speed hoists). Please mention NEW EQUIPMENT DIGEST.

take it up with ROBBINS & MYERS, INC.
SPRINGFIELD, OHIO | BRANTFORD, ONTARIO

▲ For more details circle **NED-272 H4** on enclosed inquiry slip ▲

Lepel's 3 new
LOW COST • PORTABLE
HIGH FREQUENCY Induction HEATING UNITS

Ideal for . . . .
- Production Heating of small parts
- Educational Institutions
- Research Laboratories
- Machine Shops
- Tool Rooms



HARDENING
MELTING • BRAZING
ANNEALING • SOLDERING

The Lepel line of induction heating units represents the most advanced thought in the field of electronics as well as the most practical and efficient source of heat yet developed for industrial heating. With a background of half a century of pioneering electrical and metallurgical experience, the name Lepel has become the symbol of induction heating equipment embodying the highest standards of engineering achievement, dependable low cost operation and safety.

Amazing in its speed, Lepel equipment reduces the time required for hardening, annealing, stress relieving, brazing, soldering and melting from minutes to seconds. It performs these operations with a degree of precision and uniformity rarely attained through other processes.

LEPEL Electronic Tube GENERATORS available from 1 kw. to 100 kw.
LEPEL Spark Gap CONVERTERS available from 2 kw. to 30 kw.

WRITE FOR THE NEW LEPEL CATALOG . . . 36 illustrated pages packed with valuable information on high frequency induction heating.

All Lepel equipment is certified to comply with the requirements of the FCC.

LEPEL HIGH FREQUENCY LABORATORIES, INC
55th STREET and 37th AVENUE, WOODSIDE 77, NEW YORK CITY, N. Y.

▲ For more details circle **NED-273 H4** on enclosed inquiry slip ▲

SAVE UP TO 85% ON GOVERNMENT SURPLUS

MAGNI-FOCUSER
Has fine ground lenses of optical glass. Neutralizes eye strain from close work. Binocular design gives third dimensional vision. Allows freedom of both hands. Wear over glasses. Plastic frame with adjustable headband.
SIZES: 20" focal lgth. 1¾ power – 14" focal lgth., 1¾ power, 10" focal lgth., 2½ power; 8" focal lgth., 2¾ power ..... price each ONLY 10.50

HYDRAULIC EQUIPMENT
We stock over 100,000 Hydraulic Cylinders in 106 different types and sizes. These can be adapted wherever tremendous power is needed to push, pull, hoist, mould or drive, etc.
SPECIAL
Gives 20,000 lb. thrust using 1500 PSI line pressure as obtained from our hydraulic pumps. Will produce up to 40,000 lb. thrust with 3000 PSI. Can also be used on a low pressure air system. Has 4" bore; 18" stroke; 30½" long. Ideal for shop. Part No. 29 USED 29.95 NEW 43.95

OTC TOOLS
See our complete line. Pullers for Gears, Bearings, Wheels, Pulleys, Bushings, Shafts, etc.

HYDRAULIC HAND PUMP
Operating pressure 1500 PSI. Cap., 1.5 cu. in per complete cycle ... 12.75

NEW 10 TON HYDRAULIC PRESS
Use this Press in the Shop or take it with you on the job. Frame is 4" welded channel iron. Has 4½" stroke, 2½" diam. ram. Valve operates piston in both directions. Adjustable platform. Positive power Hand Pump with handle. 2000 PSI pressure gauge. 129.00
SIZE: 60" high 27" wide 29" base

HYDRAULIC ACCUMULATORS
A-2B FLOATING PISTON TYPE – 4" x 18" Built to stand 2,000 PSI 12.75
A-5 VICKERS – 10" dia. Ball type. Built to stand 2000 P.S.I. 24.50
NOTE: Stocks include bargains in Hydraulic Pumps – Valves – Motors – Boosters – as well as Oil, Water and Fuel Pumps, etc.

WORLD'S MOST AMAZING BARGAIN CATALOG
320 PAGE-1954 EDITION
Packed with SENSATIONAL VALUES in GOV'T SURPLUS – FACTORY CLOSE-OUTS – and GENERAL MERCHANDISE. Fully priced and illustrated. Thousands of items in Machine and Industrial Tools – Hydraulic Equipment such as Cylinders, Pumps, Valves, Motors, Fittings, etc. Bargains in Electric Motors, Generators, Blowers, Parts, etc. Also Hand and Power tools, Precision Instruments, Bearings, Hose Clamps, Winches, Foam Rubber, Microscopes, etc. ALL AT PALLEY BARGAIN PRICES – PRICED TO SELL!

Palley SUPPLY CO. 2263 E. VERNON AVE., DEPT. NED-8 LOS ANGELES 58, CALIF.
Pay by M.O. or check. P.O.'s accptd. from D&B firms. ½ deposit with C.O.D.'s. Prices FOB Los Angeles.

For more details circle NED-274 H4 on enclosed inquiry slip

NEW

Automatic POWER-FED Cutting Head for STONE Model M-75

ONE SIMPLE LEVER FOR AUTOMATIC CUTTING

You Save up to 25% on wheel costs with power feed!

Now — quicker — safer — cutting with controlled feeds, gives even greater efficiency to Stone High-Speed cutting equipment. The automatic feed improves the quality of cut, eliminates operator fatigue, increases production rates and increases wheel life.

AVAILABLE AS OPTIONAL EQUIPMENT ON NEW MACHINES OR AS SEPARATE UNIT FOR INSTALLATION ON PRESENT MACHINES.

Write Today For Complete Information

STONE MACHINERY CO., INC.
Fayette St. Manlius, N. Y.

For more details circle NED-275 H4 on enclosed inquiry slip

Save $$$ when you machine Laminates

All grades of Synthane laminated plastic are comparatively easy to machine on standard shop equipment. By knowing the ins and outs, and by using specialized tools, an even better and faster job can be done. We have the equipment and the know-how.

The next time you need machined laminated parts, let us make them for you. You'll get precise work, without waste, produced by craftsmen skilled in plastics. The coupon will bring you complete information.

SYNTHANE
Manufacturers of Laminated Plastics

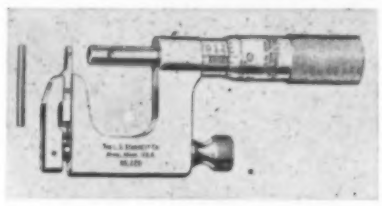
SYNTHANE CORPORATION
N. E. RIVER ROAD, OAKS, PA.

Please send me information about machining Synthane and the Synthane fabricating service.

Name_____
Address_____
City_____ Zone_____ State_____

For more details circle NED-276 H4 on enclosed inquiry slip

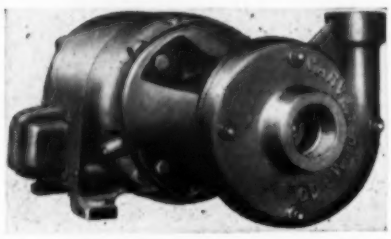
TWO-ANVIL MICROMETER
rod and flat types lock in position



Quick, accurate measurement of tubing, cylindrical wall, from holes or slots to an edge and in hard-to-reach locations is possible with model 220 Mul-T-Anvil micrometer. Two interchangeable anvils are furnished: rod anvil about 0.120-in. diameter and flat anvil 0.125-in. and 0.060-in. thick at opposite ends. Desired anvil is placed in vise type frame and, after tightening locking screw, micrometer is ready for use. Tool can also be used as height gage by removing the clamping vise jaw. Range is 0 to 1 in. by 0.001-in. Made by **L. S. Starrett Co.**, Dept. ED, Athol, Mass.

For more details circle NED-277 H4 on enclosed inquiry slip

CLOSE-COUPLED CENTRIFUGAL PUMP
delivers up to 150 gpm at 140 ft head

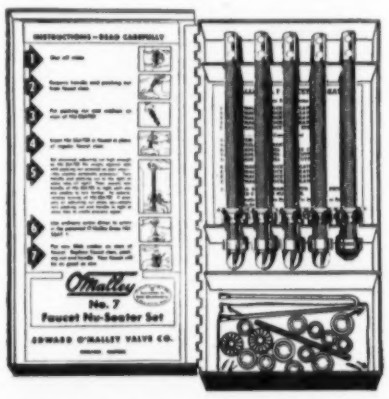


Close-coupled design of model BB centrifugal pump makes it practical where space is at a premium. It has shown versatility in air conditioning cooling tower use, in industrial plants and other general service applications. Pumps are made in 2, 3 and 5-hp sizes; and have 1½-in. discharge. Capacities range up to 150 gpm at heads to 140 ft. Made by **Carver Pump Co.**, Muscatine, Iowa.

For more details circle NED-278 H4 on enclosed inquiry slip

FAUCET REPAIR SETS
include seats, washers and tools

Industrial maintenance men can quickly and easily repair leaky faucets and, where necessary, rethread them for new seats with the Faucet Nu-Seater set No. 7. Seats, washers and all necessary tools are included. Also available is Master Set No. 5 for repairing all Jenkins type disk valves. It includes cutters for refacing plug or ball type valves and all required tools. Made by **Edward O'Malley Valve Co.**, 11950 S. Halsted St., Chicago 28, Ill.



For more details circle NED-279 H4 on enclosed inquiry slip

THE TACHOMETER THAT REQUIRES NO MAINTENANCE
• IT'S ACCURATE
• EASY TO USE

(MEASURING 3100 RPM)
... AND SAFE
... NO CONTACT WITH MOVING PARTS

THE FRAHM® RESONANT REED TACHOMETER requires no contact with moving parts—simply touch it to the case or frame of the machine under test and read directly in rpm. No wearing parts—No oiling—Cannot overspeed.

IDEAL FOR PRODUCTION TESTING where quickness and accuracy count. Bench mounted with stimulator rods the Frahm Tachometer becomes a time and money saver for inspecting hand power tools, electric shavers and cleaners, etc. Investigate the many advantages of these unique and simple instruments. Write for Bulletin 31-D

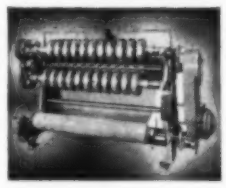
B-017

JAMES G. BIDDLE CO.
Electrical & Scientific Instruments
1316 ARCH STREET, PHILADELPHIA 7, PA.

For more details circle NED-280 H4 on enclosed inquiry slip

maybe these aren't your products

but if your problem is slitting



... here's the answer

If you want to slit cellophane, polyethylene — any of the films — or even foil laminates, glassines or wax paper . . . the Beck Razor Blade Slitter and Rewinder is your answer. At Acme Backing Corporation, Brooklyn, it helps slit large rolls of metal foil into slender threads for yarn . . . at Charles Schwartz and Company, Chicago, it speeds up production of plastic kitchen curtains and blanket storage bags. If you have a slitting problem . . . write:

CHARLES BECK MACHINE CORPORATION
409 N. 13th Street Philadelphia 8, Pa.

For more details circle NED-281 H4 on enclosed inquiry slip

IF YOU EMPLOY CARPENTERS AND USE NAILS – YOU CAN PROBABLY DO IT FASTER, BETTER, CHEAPER WITH A NAILING MACHINE . . .

USE AN fmc ALL PURPOSE INDUSTRIAL NAILER

THIS MECHANICAL NAILING MACHINE HANDLES EVERY PRODUCTION ITEM FROM BED FRAMES TO PALLETS AND GRAIN DOORS

You can cut nailing costs with mass production techniques. Modern nailing machine design eliminates the need for large production runs. Versatile operation permits even a small run to be handled with pay-for-itself economy. We can adapt a nailing machine to suit your product.

A TIME-SAVING DEVICE THAT WILL PAY DIVIDENDS THRU GREATER PRODUCTION
Driving multiple nails per stroke in a variety of nailing patterns outclasses any hammer-in-hand production. Uniform quality eliminates rejects – increases output.

HOW THE MACHINE IS MADE
Welded steel construction provides lasting hard use. Year after year performance with minimum maintenance.

SIZES AVAILABLE
Standard models select and drive up to 24 nails per stroke. Available in 48", 66" or 80" widths. Special custom adaptations are available on order.

HERE'S WHERE IT IS NOW APPLIED
Successfully adapted to nail pallets, shipping crates, redwood outdoor lawn furniture, cooling tower panels, bed spring frames, grain doors and many other wood products.

Available FROM fmc FOOD MACHINERY AND CHEMICAL CORPORATION

TRADE MARK NM753

FOOD MACHINERY AND CHEMICAL CORPORATION
PACKING EQUIPMENT DIVISION, RIVERSIDE, CALIFORNIA

WRITE FOR FREE LITERATURE!

For more details circle NED-282 H4 on enclosed inquiry slip

This MIGHTY MITE is a real Multi-purpose tool

The new 2U Impactool will do all these jobs—and do them fast—

- run and remove nuts
- drill
- ream
- tap
- drive and remove screws
- drive and remove studs
- saw holes
- drill masonry
- bore wood
- extract broken studs
- run wire brushes

This newest and lightest Impactool has the time-proven Ingersoll-Rand impact mechanism that has an unmatched reputation for power and dependability in both air and electric Impactools.

Ask for a demonstration of this new, powerful little Impactool. You'll find it featured by leading automotive jobbers and industrial distributors from coast to coast.

SPECIFICATIONS

Capacity, bolt size	¼"	Impacts per minute	2100
Weight, less cable	5 lbs.	Square Socket Driver	⅜"
Free Speed	1750 rpm	Standard Voltage	110 volts AC-DC

Ingersoll-Rand

11 Broadway, New York 4, N.Y. 18-20

Originators of Impactools—Air and Electric

For more details circle NED-283 H4 on enclosed inquiry slip

ENGINEERED CONTAINERS FOR EVERY SHIPPING NEED

General Box

1859 Miner Street, Des Plaines, Illinois

★ ★ ★ ★ ★

For more details circle NED-284 H4 on enclosed inquiry slip

New small counters of GREAT RELIABILITY

Shaft extension at right with rigid steel arm

Shaft extension at left with spring steel arm

Ideal for Built-in Application

- Endurance tested for accuracy to over 100 million counts.
- Small, compact, rugged construction. Main body only 1 43/64" x 1 35/64" x 1 7/16" high.
- Reset to zero with one complete turn of reset knob.
- Slotted holes for easy mounting.
- Steel case and frame with enduring chrome plated finish.
- Furnished with rigid or flexible operating arm, right or left shaft extension, top-coming or top-going arm action.

SEE, COMPARE and TEST the new Junior King. Ask your PIC Representative or write.

MODERN COUNTING DEVICES
Stroke and Revolution Counters
Coil Winding Counters
Electric Counters
Automatic Batch Counters
Actuating Switches

Complete catalog mailed on request

PRODUCTION INSTRUMENT COMPANY
700-12 W. Jackson Blvd., Chicago 6, Ill.

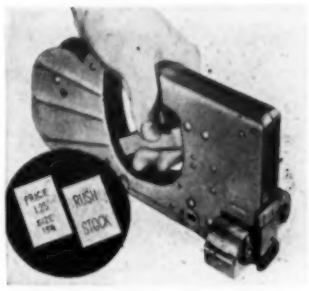
For more details circle NED-285 H4 on enclosed inquiry slip

ABRASIVE SAW BLADES have universal bushings

Handee abrasive saw blades, made in 7 and 8-in. diameters, are equipped with universal bushings which enable them to be used on most makes of portable tools, bench and stand grinders and on flexible shafts with guards. Masonry and general purpose blade types are available. Each blade is packaged in a protective envelope. Made by **Chicago Wheel & Mfg. Co.**, Dept. NE, 1101 W. Monroe St., Chicago 7, Ill.

For more details circle NED-286 H4 on enclosed inquiry slip

LABEL PRINTER & ATTACHER affixes ¾ x 1⅛-in. label



By simple squeeze of trigger, this one-hand labeling tool both prints and attaches a label in one operation. Removable snap-in chase allows standard setup changes and simple change of type. Printing, which can be on easy-to-load self-adhesive rolls or directly on product, is performed by impact through inked ribbon which moves with each new label. Size of label is ¾ x 1⅛ in. Made by **Trig-A-Tape Corp.**, Dept. 10, 117-02 New York Blvd., Jamaica 34, N. Y.

For more details circle NED-287 H4 on enclosed inquiry slip

TWO-SWITCH GOVERNOR each switch individually adjustable

Two snap-action switches rated at 10 amp, 110 v ac are incorporated in this governor for either opening or closing circuits at any speed over 350 rpm. Each switch is individually adjustable up to 2000 rpm above specified set speed. Unit has been redesigned with three set screws in angle slots making possible a 20 per cent increase or decrease in adjustment range over the previous model. GS body design series is adaptable to standard distributor take-off to accommodate gear or coupling drives, while GH series is for standard SAE tachometer drive. Made by **Synchro-Start Products, Inc.**, Dept. 2N, 8151 N. Ridgeway Ave., Skokie, Ill.

For more details circle NED-288 H4 on enclosed inquiry slip

Then you need to know about NEW Irvington Insulating Varnish No. 180

This new varnish was specifically formulated to provide outstanding electrical and physical properties at temperatures up to 356° F.

Irvington Varnish No. 180 has a dielectric strength of 2,100 vpm (dry), good resistance to moisture and acids; excellent oil resistance, adhesion, toughness and storage stability. Can be used on practically any type of electrical equipment (with the possible exception of totally enclosed). Write for Technical Data Sheet.

LOOK TO IRVINGTON FOR INSULATION LEADERSHIP

IRVINGTON VARNISH & INSULATOR

DIV. OF MINNESOTA MINING & MFG. CO.

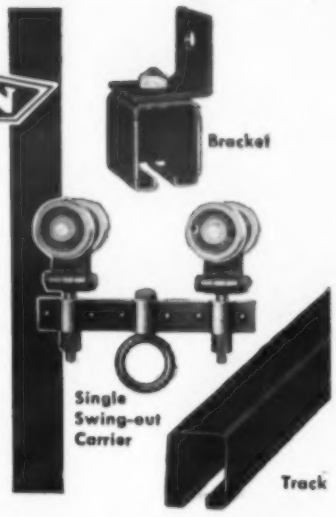
14 ARGYLE TERRACE, IRVINGTON 11, N. J.

Plants: Irvington, N. J.; Monrovia, Calif.; Hamilton, Ontario, Canada

For more details circle NED-289 H4 on enclosed inquiry slip

COBURN OVERHEAD CONVEYING EQUIPMENT

simple, easy installation



Coburn track, brackets and carriers are simple in design . . . present no complicated installation problems. In fact, your own plant personnel can easily handle the job. Inexpensive re-arrangement or extension can also be made at any time because of the section design of Coburn Overhead Monorail.

Write for Catalog #220 to Coburn Sales and Engineering, 56 Sterling Street, Clinton, Mass.

THE COLORADO FUEL AND IRON CORPORATION • Denver and Oakland
WICKWIRE SPENCER STEEL DIVISION • Atlanta • Boston • Buffalo
Chicago • Detroit • New Orleans • New York • Philadelphia

1984

COBURN PRODUCTS

PRODUCTS OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION CFI

For more details circle NED-290 H4 on enclosed inquiry slip

Goodyear Industrial Tires are JOB-FITTED* for every need!

Goodyear's easy-rolling XTRA CUSHION solid tires in the All-Service tread (above) are made with a completely new compound that gives far greater cushioning and low rolling resistance.

***BY SIZE**
(the right size for your equipment)

Over 100 different solid tire types and sizes plus a full line of pneumatic and semi-pneumatic tires — *America's most complete line of industrials!*

***BY TREAD**
(the right tread for your floor surfaces)

Smooth and Grooved for easy rolling. All-Service or the famous All-Weather, wherever traction is needed.

***BY COMPOUND**
(the right compound for best tire life in your operation)

Your choice of either UNiversal chip-resistant or Neoprene oil- and acid-resistant compound *at no extra cost!*

For a free job-fitted tire appraisal in your plant and suggestions on how you can cut tire costs, call your local Goodyear Dealer or write: Goodyear, Industrial Tire Sales, Akron 16, Ohio.

USE THE RIGHT TIRE FOR THE RIGHT JOB—USE

GOODYEAR

INDUSTRIAL TIRES

Xtra Cushion, All-Weather, All-Service—
T.M.'s The Goodyear Tire & Rubber Company, Akron, Ohio

For more details circle NED-291 H4 on enclosed inquiry slip

THE ONLY SAFETY SWITCH IN SPECIAL INDUSTRY ENCLOSURE!

NOW- NEMA Type XII

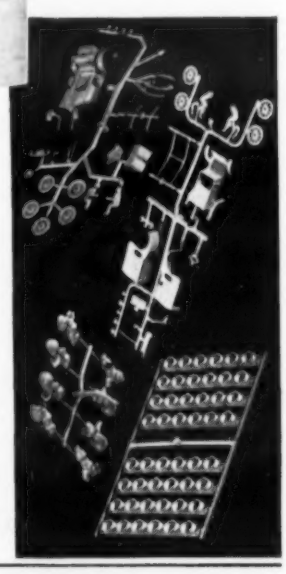
• This new heavy duty switch, built to NEMA XII specifications, is "tailor-made" for applications requiring protection from dirt, dust, oil and coolant.

Write for Bulletin SD-5. Address Square D Company, 6060 Rivard Street, Detroit 11, Michigan

ASK YOUR ELECTRICAL DISTRIBUTOR FOR SQUARE D PRODUCTS

SQUARE D COMPANY

▲ For more details circle **NED-292 H4** on enclosed inquiry slip ▲

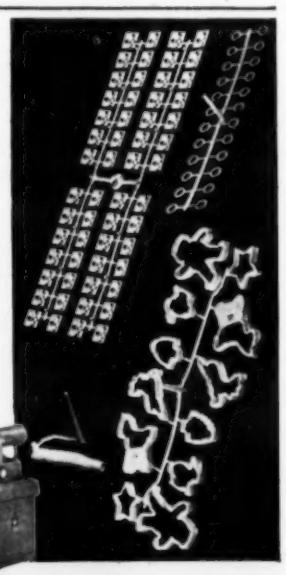


MODEL "4" — Now fully automatic, the LEWIS "4" molding machine gives you more than ever. New features include low-pressure closing control . . . infinitely variable adjustment prior to final close. Any resistance stops machine automatically and sets off warning light and bell. For high-speed mass-production of 2 to 3-oz. parts, the LEWIS "4" is your best buy!

HERE'S WHAT YOU GET WHEN YOU BUY...

LEWIS

PLASTICS MOLDING MACHINES



MODEL "6" — Featuring the "HYDRA-LOCK" clamping mechanism, the LEWIS "6" does the work of larger machines at a fraction of their cost. Fast injection system . . . 200-ton clamp . . . automatic molding cycle . . . compensating feed . . . injection pressures up to 15,000 psi and other exclusive features provide high volume production of large projected area parts. For profitable molding, specify the LEWIS "6"!

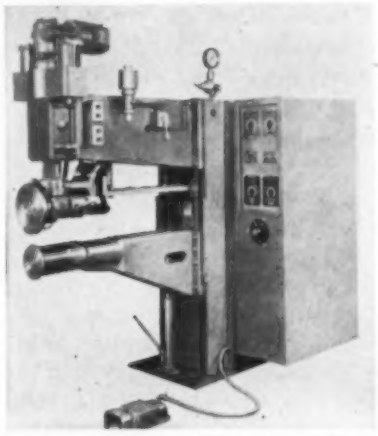
Write for These Bulletins for Complete Details

2002-LW

THE LEWIS WELDING AND ENGINEERING CORPORATION
14 INTERSTATE STREET • BEDFORD, OHIO

▲ For more details circle **NED-293 H4** on enclosed inquiry slip ▲

SEAM WELDERS
100, 150 and 200 kva models offered

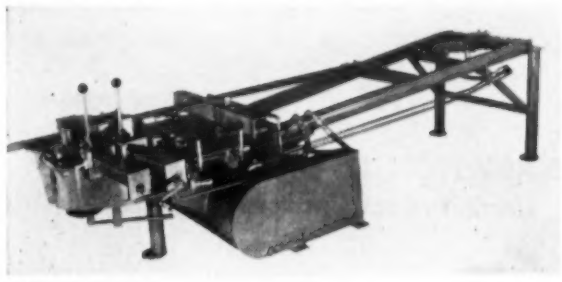


Throat depths from 18 to 48 in. and 1500 to 3000 - lb maximum electrode force, dependent on throat depth, are features of the MP 2 series of low impedance single-phase seam welders. Air - operated press type units are available in 100, 150 and 200 kva ratings at 50 per cent duty cycle. Welders will make welds on large production runs on two thickness of clean mild steel in minimum gages of 0.021-in. and maximum gages of 0.109-in. and stainless steel in minimum and maximum gages of 0.031 and 0.109-in. By varying weld time and current and electrode force, heavier gages can be joined at slower speeds. Made by **Sciaky Bros., Inc.**, 4517 W. 67th St., Chicago 38, Ill.

▲ For more details circle **NED-294 H4** on enclosed inquiry slip ▲

HYDRAULIC PIPE BENDER
left and right-hand 180-degree bends made in 2½-in. OD tubing

Both clockwise and counter-clockwise 180-degree bends can be made in 2½-in. OD steel tubing with 0.065-in. wall, or 1½-in. standard pipe by model

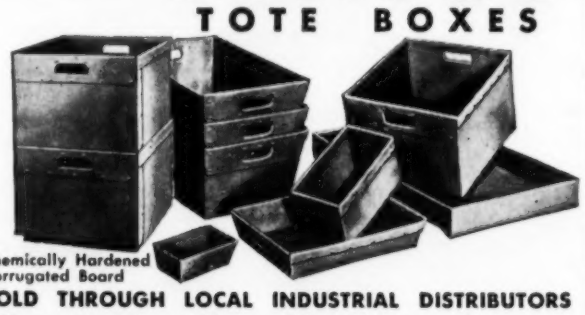


800-2 in. semiautomatic, hydraulic bending machine. Rotary type unit is built from arc-welded steel sections. Bending head speed is about 8 rpm and mandrel clearance is 8 ft 6 in. Motor, pump and storage tank are in machine base. A 5-hp motor that can be wired for 220 or 440-v three-phase, 60-cycle ac is included.

Maximum radius adjustments are 10, 14 and 18 in. for 2½, 1½ and 1¼-in. OD tube sizes, respectively. A degree-of-bend dial is mounted on head, while an adjustable stop to control head movement mounts on disk, underneath mainshaft. Gear driven shaft is located in ball bearings. Made by **Wallace Supplies Mfg. Co.**, Dept. NDC, 1300 Diversey Pkwy., Chicago 14, Ill.

▲ For more details circle **NED-295 H4** on enclosed inquiry slip ▲

FAMOUS "CHEM-BOARD"* CONVOY TOTE BOXES



*Chemically Hardened Corrugated Board

SOLD THROUGH LOCAL INDUSTRIAL DISTRIBUTORS

Cost—weigh—50% to 60% less than steel. A wide range of sizes in standard and custom made NESTING, STACKING, VERTICAL TOTE BOXES. Write for complete information, prices, name of distributor in your area.

CONVOY RECORD STORAGE FILES
Sold Only by YOUR LOCAL STATIONER

Used by most famous names in industry and businesses of all kinds. CONVOY "CHEM-BOARD" files for record storage made in letter, legal, and 12 other sizes. Stack to ceiling, mate together. Call your local stationer or write for name of stationer nearest to serve you.

CONVOY, INC.
Canton 6, Ohio
P. O. Station B, Box 216-N

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Specify ESSEX EXTRA TEST TEFLON MAGNET WIRE

WIRE SX PRODUCTS

for Your Highest Temperature Applications

★ CAN WITHSTAND 250° C for short periods of time; or 200° C continuously.
★ SUPERIOR RESISTANCE to acids, solvents chemicals and moisture.
★ GOOD SPACE FACTOR, flexibility and abrasion resistance.

Teflon is the DuPont trademark for Polytetrafluoroethylene enamel.

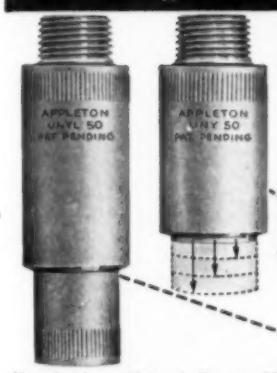
ESSEX WIRE CORPORATION
FORT WAYNE 6, INDIANA

WAREHOUSES* AND SALES OFFICES: *ATLANTA, GEORGIA, BOSTON, MASS.; *CHICAGO, ILL.; CLEVELAND, OHIO, DALLAS, TEXAS, DAYTON, OHIO, *DETROIT, MICH., HARTFORD, CONN., INDIANAPOLIS, IND., *KANSAS CITY, MO., *LOS ANGELES, CALIFORNIA, MILWAUKEE, WISC., MINNEAPOLIS, MINN., *NEWARK, N. J., *PORTLAND, OREGON, UPPER DARBY, PHILADELPHIA, PENNSYLVANIA, ROCHESTER, NEW YORK, *ST. LOUIS, MISSOURI, *SAN DIEGO, CALIFORNIA, *SAN FRANCISCO, CALIFORNIA

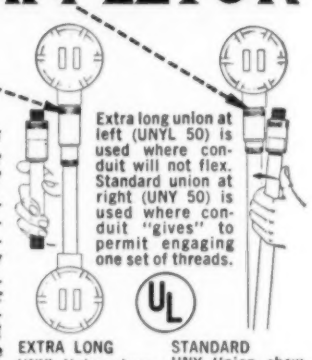
▲ For more details circle **NED-297 H4** on enclosed inquiry slip ▲

NEW! Self-Adjusting, Explosion-Proof

EXPANSION UNIONS by APPLETON



Explosion-Proof Regardless of Position . . . Only One Unit . . . Two Moving Parts! Expansion adjustment is built-in! The *two* moving parts telescope or expand to accommodate usual thread lengths. Only *two* tightening operations . . . each made separately! Smaller external diameters for convenient use in restricted quarters! Precision construction . . . the union remains completely explosion-proof at all times, regardless of its retracted or extended position! Special design guarantees positive ground at all times! Write for details!



EXTRA LONG UNYL Union showing up to 1-11/32" expansion . . . serves the purpose of two conventional type unions!

STANDARD UNY Union showing up to 21/32" expansion . . . for installation wherever conventional types were previously used!

Sold Exclusively Through Selected Wholesalers

APPLETON ELECTRIC COMPANY
1758 WELLINGTON AVENUE • CHICAGO 13, ILLINOIS

Rely on APPLETON . . . *The Standard for Better Wiring*

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idea for AUTOMATION with CAMBRIDGE Woven Wire Conveyor Belts

CONTINUOUS BRAZING

Heat treat, quench, cool in one continuous operation on Cambridge Belts!

In temperatures from sub-zero to as high as 2100° F . . . in dry or highly corrosive conditions, Cambridge Woven Wire Conveyor Belts help provide cost-cutting, automatic, *continuous* production. No batch operations. Less manual handling.

Open mesh weave means free circulation of process atmosphere, free drainage of process solution. All-metal construction cuts maintenance, stretches belt life . . . Cambridge belts are available in any metal or alloy and any length or width. A variety of weaves and mesh sizes to meet your needs are also available.

The Cambridge Wire Cloth Co.
Dept. C • Cambridge 8, Md.

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

OFFICES IN PRINCIPAL INDUSTRIAL AREAS

FREE MANUAL gives details, specifications, designs, useful metallurgical tables. Write, or ask your Cambridge Field Engineer. See "Belting-Mechanical" in classified 'phone book.

▲ For more details circle **NED-299 H4** on enclosed inquiry slip ▲

DESIGN

Write for our latest bulletin that shows typical installations of ROCKFORD CLUTCHES and POWER TAKE-OFFS, with diagrams of unique applications, capacity tables, dimensions and specifications.

ROCKFORD CLUTCHES are thoroughly tested to make sure they will stand up under full torque, shock-load, engagement frequency and duration, slippage and reversals, to help insure more work-time, with less down-time from machines in which they are used. Because of this exacting to-the-job-application, down-time for clutch adjustments or repairs has been reduced to a minimum. Let ROCKFORD engineers help get more work-time for your machines.

ROCKFORD CLUTCH DIVISION
BORG-WARNER
312 Catherine Street, Rockford, Illinois

ROCKFORD CLUTCHES

For more details circle NED-300 H4 on enclosed inquiry slip

FREE—Illustrated catalog on a better method of grinding conical—spherical—cylindrical surfaces

Here are valuable details on the Geargrind Universal Oscillating Grinder. Whether you require production economy or tool room accuracy on internal and external grinding, you'll save time and money with this versatile and rugged grinder. This catalog gives complete information on types of work performed, methods of application and specifications. Write today—we will be happy to send you a copy.

THE GEARGRINDING MACHINE CO.
3925 Christopher, Detroit 11, Michigan

GEARGRIND Detroit

For more details circle NED-301 H4 on enclosed inquiry slip

New! AMERClone

Dry Centrifugal Dust Collector

A new dry centrifugal, offering collection efficiencies equal to or better than other available units—designed to handle large exhaust volumes containing abrasive dust in high concentrations. AMERclone's major advantages are:

- Requires small space due to fact that a single AMERclone tube, 4" in diameter, has an approach velocity of 1000 fpm and a cleaning capacity of 350 cfm.
- Less subject to abrasion through use of thick wall gray iron castings plus fact there is no recirculation of dust load to increase abrasive effect.
- Collection efficiency remains practically constant over wide range of exhaust volumes.

For complete AMERclone data, write for Bulletin 291

American Air Filter COMPANY, INC.
391 Central Avenue, Louisville 8, Kentucky
American Air Filter of Canada, Ltd., Montreal, P. Q.

For more details circle NED-302 H4 on enclosed inquiry slip

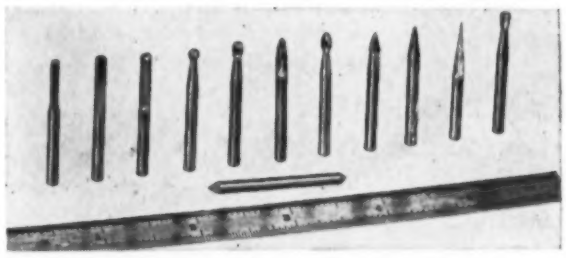
PIPE COUPLING
for pressures up to 2000 psi

Compression pipe coupling has compression gaskets of rubber, Neoprene or other materials. Installer merely inserts pipe end into the coupling and tightens the nuts. This produces a seal which will withstand pressures up to 2000 psi without leakage. Steel gasket retainers enable compression nuts to be tightened without distorting gaskets or causing thread seizure. Gaskets are replaceable. Couplings are suitable for use with either liquids or gases and are available in a wide range of materials to suit the service. They are supplied in ½, ¾, 1, 1¼, 1½ and 2 in. IPS, in standard sleeve lengths from 2¾ to 4 in. Other lengths are available to order. Made by **Utility Clamp & Equipment Co.**, 108 W. Sixth St., Los Angeles 14, Calif.

For more details circle NED-303 H4 on enclosed inquiry slip

CARBIDE BURS
with diamond lapped cutting edges

Peaks on cutting edges of Starbide carbide burs are so small that normal cutting shock will not break them. Superfinishing of the cutting edges is by



diamond laps. Burs can be used for deburring, tool and die forming and finishing, filing and milling. Hard and soft steels, special alloys, aluminum, magnesium, brass, cast iron, glass, ceramics, plastics and other material can be machined. Twelve styles are available with both ⅛-in. and 3/32-in. shanks. Special sizes can be ordered. Made by **Starlite Industries Inc.**, Dept. NE, 58th at Market St., Philadelphia 39, Pa.

For more details circle NED-304 H4 on enclosed inquiry slip

Air & Oil Hydraulic Components

Hydraulic Press Mfg. Co., Hydraulic Power Div.—Serving as a comprehensive guide to line of cylinders, pumps, power units, valves, motors and accessories, 28-page illustrated condensed catalog 1101 contains general specifications. Cross sectional diagrams are included for the air and oil hydraulic components.

For more details circle NED-305 H4 on enclosed inquiry slip

JOHNSON BAND SAWS

SPECIFICATIONS—MODEL B

Capacity—5" rounds, 10" flats.
Height Overall—(Closed)—32".
Blade Length—7'5" x ½" x 23 ga.
Floor Space—46" x 28".
Weight—(Uncrated) 235 lbs. Crated 280 lbs. Boxed for Export 400 lbs.
Wheel Diameters—10"
Motor—⅓ H.P. any voltage available.
Speeds—45, 90 and 150 ft. per min.
Casters—Optional at slight extra cost.

MODEL J, 10" X 18" CAPACITY ALSO AVAILABLE
WRITE FOR DETAILS

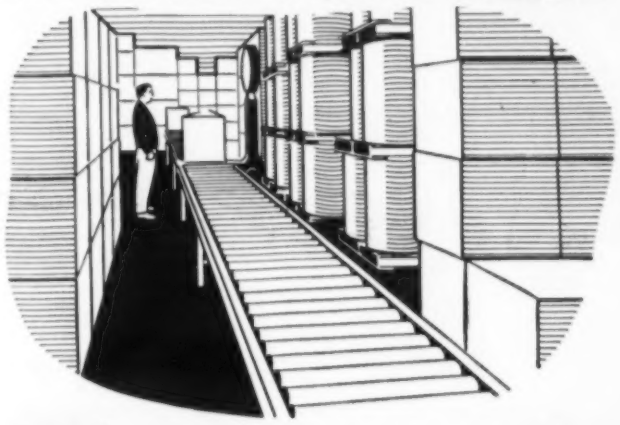
JOHNSON MANUFACTURING CORP.
ALBION, MICHIGAN

For more details circle NED-306 H4 on enclosed inquiry slip

Mathews Roller Conveyers Cover an Unusually Wide Range of Load Ratings

ELLWOOD CITY, PA.—Whatever the package being handled—whether its weight is measured in pounds or tons—there is a Mathews Roller Conveyer of the right capacity to handle it.

With a range of roller sizes reaching from 1" to 6½" and capacities from 50 pounds to 16,000 pounds, the Mathews Roller Conveyer line is complete. That's why, throughout industry today, plant operating men are saying, "If it's a roller conveyer job, it's a natural for Mathews engineers." Call your nearby Mathews representative or write to MATHEWS CONVEYER COMPANY, Ellwood City, Pa.

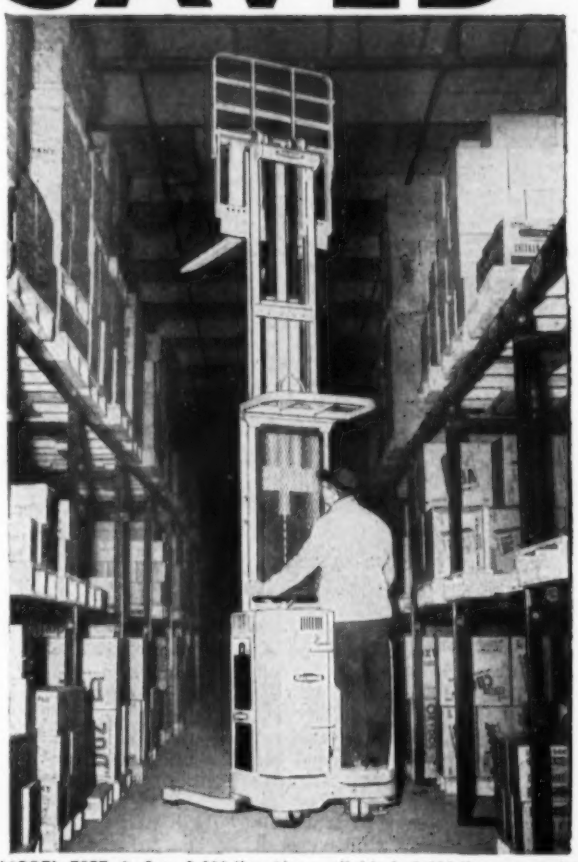


Whatever your product—it must be handled efficiently—you can depend on

MATHEWS CONVEYERS

For more details circle NED-307 H4 on enclosed inquiry slip

SAVED



MODEL E25T • Cap. 2,000 lbs. Also available in 3,000 lb. cap. model.

6 FT. in EVERY AISLE

with RAYMOND *Electric* TIERING TRUCK

ANOTHER LARGE WAREHOUSE actually halved its aisle space with a RAYMOND Tiering Truck! 12-ft. aisles were reduced to 6-ft. Result: more useable storage space.

You can make space savings in your own plant or warehouse. Because this truck actually right-angle tiers 4-ft. pallet loads from aisles only 6-ft. wide.

RAYMOND TIERING TRUCK . . . operates in narrow aisles due to its short length and patented* off-set drive wheel with 200° turning arc. Lightweight permits use on low-capacity elevators, floors. 51" free lift enables loads to be stacked in low-ceiling areas, truck trailers, boxcars without increasing overall height. Truck is equipped with new power unit that opens up like a book for fast, easy servicing.

*PATENT NO. 2,564,002

GET FULL DETAILS!

The RAYMOND CORPORATION
4141 Madison St., Greene, N.Y.

( ) Please send Bulletin 830 describing 2,000 lb. cap. Tiering Truck.
( ) Please have your representative call.

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

For more details circle NED-308 H4 on enclosed inquiry slip

VU-O-MATIC!

...the modern answer to small parts storage

COMPACTNESS... visibility ... protection. That's the outstanding combination offered by Union Metal VU-O-MATIC rotary stands. Two to four times more small parts can be stored with this jar-tray development than in ordinary bins or drawers.

Jars mean quicker, faster visual location. No more wasted time searching through drawer after drawer. Parts stay clean and moisture-free indefinitely, eliminating pre-use cleaning. Freedom from corrosion is maintained for long periods of storage.

Folder MH-810 offers additional informative data on specifications, combinations, simplifying stock control and weight-count inventory. Write today to The Union Metal Manufacturing Co., Canton 5, Ohio, for your copy.

UNION METAL
Material Handling Equipment

For more details circle **NED-310 H4** on enclosed inquiry slip

For fast, secure CARTON SEALING

NATIONAL TAY-PER®

- **SAVES TIME**—a pull of the lever automatically measures, moistens, cuts and delivers tape lengths up to 36", in any width up to 4". Automatic moistening control* reduces rub-down time.
- **SAVES TAPE**—for uniform run of boxes, two strip sizes can be obtained alternately. For variety packaging, any required length can be selected instantly.
- **AVOIDS DAMAGE CLAIMS**—positive moistening control "welds" tape to cartons for double protection.
- **DEPENDABLE** because it's a National, quality-built and engineered for years of trouble-free service.

*Endorsed by the Association of American Railroads and the Gummed Industries Association, Inc.

itstix® PRINTED TAPE
Used with the National Tay-Per No. 52, Itstix Printed Tape "padlocks" your package or carton, provides insurance against pilferage, aids in tracing lost shipments, and constantly advertises your product. Let us create a distinctive, eye-dentifying tape design for you. No charge.

FREE 10-day Trial OFFER

Put this automatic No. 52 National Tay-Per to work for you in your own shipping department, for 10 days, without cost or obligation. See how it streamlines your packaging operations and does a better sealing job. Mail coupon for free trial.

NASHUA **NASHUA PACKAGE SEALING**
DIVISION OF NASHUA CORPORATION
Dept. Q-5, 44 Franklin Street, Nashua, N. H.

Please send me a National Tay-Per for a FREE 10-day trial.

Name _____ Title _____
Firm _____
Street _____
City _____ State _____

For more details circle **NED-311 H4** on enclosed inquiry slip

INFRARED CHEMICAL ANALYZER determines up to ten components in 10 min. and records results instantly

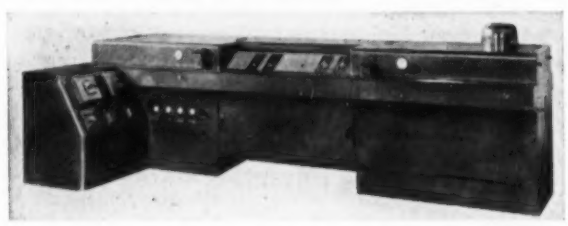
Automatic chemical analysis of up to ten components in a sample is made in 10 minutes by the Multi - Component infrared analyzer. Results are presented instantly on an electric typewriter, counter or punch-card device. Operation is largely by pushbutton. Instrument consists of standard single beam infrared spectrometer attached to control unit which sequences through ten predetermined analytical wavelengths. Sample cell is automatically shifted into and out of infrared beam to give quantitative readings.

Photometric accuracy in 15 to 35 per cent and 35 to 60 per cent transmission range is ±0.002 and ±0.001-absorbency units, respectively. Average error is less than 0.1-per cent absolute and relative error less than 0.2-per cent of amount present. For calibration purposes, wavelength-indexing and zero-setting check points may be selected by pushbuttons at end of automatic cycle. Made by **Perkin-Elmer Corp.**, Danbury Rd., Norwalk, Conn.

For more details circle **NED-312 H4** on enclosed inquiry slip

SPRAY DECORATING MACHINE automatic, for parts up to 24 x 7 in.

High production electrically-operated spray machine automatically decorates parts or pieces up to 24 x 7 in. wide. Provision is made for automatic mask

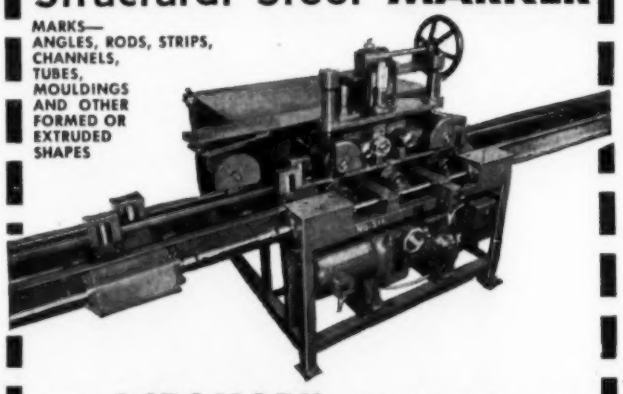


washing, one set of masks being washed while others are used for painting. Wash cycle is dial controlled up to 2 minutes, then masks are automatically dried. Machine, which can be used for painting with more than one color, is conveyorized and can be designed for one or two man operation. With one operator, it will produce up to 2400 pieces per hour; with two, up to 4800 pieces per hour. Single operator machine requires only four masks, two in the painting area and two in the washer. Made by **Conforming Matrix Corp.**, 338-1 Factories Bldg., Toledo 2, O.

For more details circle **NED-313 H4** on enclosed inquiry slip

Structural Steel MARKER

MARKS— ANGLES, RODS, STRIPS, CHANNELS, TUBES, MOULDINGS AND OTHER FORMED OR EXTRUDED SHAPES



THE ACROMARK MODEL NO. 511 "ROLL TYPE" MARKING MACHINE

is complete with conveyor extensions to carry lengths of continuous extrusions underneath the finishing and marking roll for continuous or intermittent marking. Mechanically adjustable, motor driven, efficient—this is only one of hundreds of different types of marking machines made by "The Original Marking Specialists".

Write for catalog—NOW

ACROMARK
THE ACROMARK COMPANY
7-11 MORRELL ST., ELIZABETH, NEW JERSEY

For more details circle **NED-314 H4** on enclosed inquiry slip

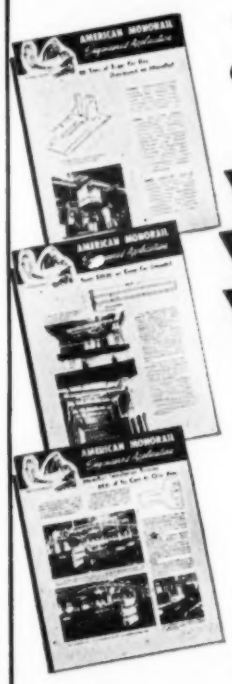
CONSISTENTLY SOUND WELDS REDUCE COSTS ON WELDING LOW ALLOY-HIGH TENSILE STEELS

No Underbead Cracking

The introduction of low hydrogen electrodes virtually revolutionized welding procedures on high tensile steels. Without pre-heat or post-heat, sound welds can be produced with no danger of underbead cracking. As a leader and pioneer in this field, Arcos offers a complete line of Low Hydrogen Electrodes that assures you the maximum in quality, performance and dependability. These factors are indispensable for producing high strength welds at low cost. You get them consistently with Arcos. For more selection information on Arcos Low Hydrogen Electrodes, write for a copy of the "Arcos Selector Chart".

The ARCOS CORPORATION
1500 South 50th Street, Philadelphia 43, Pa.

For more details circle **NED-315 H4** on enclosed inquiry slip



every study shows a Handling Saving

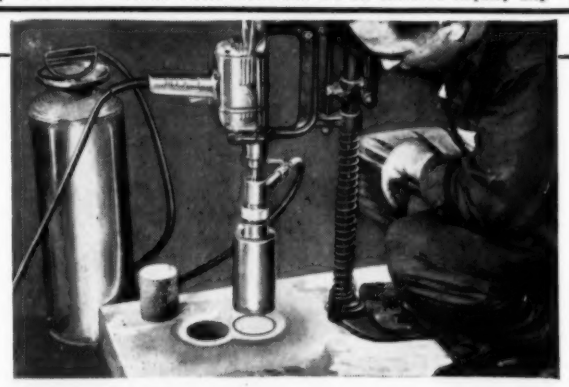
80 TONS OF SUGAR PER DAY
SAVES $30 ON EVERY CAR UNLOADED
RETURNS 84% OF ITS COST

Many companies are checking their handling problems against the American MonoRail Case Study File of "Engineered Applications." The file contains a series of case studies taken from many successful American MonoRail installations.

If you want to lower your handling costs, speed up production and cut maintenance overhead, let us send you this file. Just drop us a line on your business letterhead, asking for "Engineered Applications File F-1."

AMERICAN MONORAIL COMPANY
OVERHEAD HANDLING EQUIPMENT
13116 ATHENS AVENUE • CLEVELAND 7, OHIO

For more details circle **NED-316 H4** on enclosed inquiry slip



Only 90 seconds to drill 3½" holes through 4" concrete slab with TRUCO WATER SWIVEL and TRUCO SWIVEL DIAMOND DRILL BITS

This combination can drill at high speed in hardest aggregates with only 150 lbs. pressure and ½" H.D. motor as against 1,000 lbs. pressure and 1"-1¼" H.D. motor specified for other tools. Truco combination can drill *reinforced concrete;* amazing drilling speed in brick, granite, ceramic tile, marble. Truco Water Swivel and Truco Swivel Diamond Bits can easily pay for themselves on your first job. Write for folder:

WHEEL TRUEING TOOL COMPANY
55-3200 West Davison Avenue • Detroit 38, Michigan

For more details circle **NED-317 H4** on enclosed inquiry slip

Precision Paper Products

sonoco

CAN WE SERVE YOU?

CONE SHAPES AT A SAVING TO INDUSTRY

*SIZES: 1" to 30" lengths.

*TAPERS: 45" to 44°.

*TOPS: Straight, round, open, closed.

*FINISHES: Smooth, rough, ground, flocked.

Cones may be impregnated for strength, toughness and waterproofed. They can also be perforated, printed, lacquer tipped, scored, notched, covered with novelty wraps. Also supplied in various colored stock. We make cone shaped containers adaptable for protective packaging, novelties, horns, etc. Can we serve you?

SONOCO PRODUCTS COMPANY

MAIN OFFICE—HARTSVILLE, S. C.

MYSTIC, CONN. LOS ANGELES, CAL. BRANTFORD, ONT. LOWELL, MASS. PHILADELPHIA, PA. AKRON, IND. GARWOOD, N.J. GRANBY, QUEBEC

DEPENDABLE SOURCE OF SUPPLY

For more details circle NED-318 H4 on enclosed inquiry slip

For Trouble-Free Pipe Threading ...its a 65R

RIDGID

This 65R Threads 1" to 2" pipe with 1 set of dies ...and it won't jam!

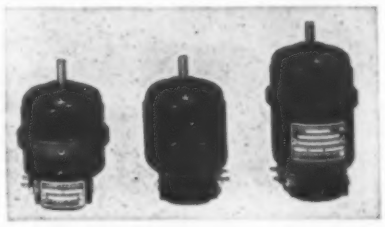
You won't find a die stock to equal this popular 65R—anywhere! It saves time—one set of self-contained high-speed dies adjust to 1", 1¼", 1½" or 2" pipe or conduit in 10 seconds! Mistake-proof self-centering work-holder sets to size instantly! It saves trouble—lead screw won't jam, it kicks out automatically when standard length thread is cut. Clean perfect threads, *fast!* For trouble-free extra-easy pipe threading buy 65R at your Supply House.

THE RIDGE TOOL COMPANY · ELYRIA, OHIO, U.S.A.

RIDGID Work-Saver Pipe Tools

For more details circle NED-319 H4 on enclosed inquiry slip

TACHOMETER-GENERATORS speed range is from 50 to 5000 rpm



Permanent - magnet, direct current, commercial - quality tachometer-generators are priced approximately one - third less than equivalent models made to full MIL specifications. M-22 and M-24 are designed for flat and flange mounting, respectively. They have outputs of 1 v per 100 rpm. L-24 can be either flat or flange mounted and produces 3 v per 100 rpm. Speed range of all models is from 50 to 5000 rpm. Tolerance on output voltage is ±10 per cent. Die-cast aluminum frame, shielded ball bearings and terminals, stainless steel shaft, 11-slot armature and commutator and vacuum-impregnated Formvar-type windings are features. Model L-24 has 2½-in. diameter and 4-in. length. Made by **Instrument Motors,** Box 5, Stamford, Conn.

For more details circle NED-320 H4 on enclosed inquiry slip

BUCKET LOADER & YARD CRANE former in ¾ or 1 cu yd capacities, latter has 12-18 ft boom extension

Loading and handling versatility are featured by the Speed Swing loader available in ¾ or 1 cu yd capacities and the model 21C yard crane. Loader, shown in photo, can be equipped with bucket, fork lift, tote-crane or snow removing attachments. Other features of this machine include two or four-wheel drive, 30-degree bucket tilt-up, 180-degree boom swing and two or four-wheel hydraulic steering. At loading height of 7 ft it reaches 5½ ft.

Yard crane features telescoping boom extendable from 12 to 18 ft and a lifting capacity of 6000 lb at 6-ft boom radius. Boom swings through 180-degree arc. Operation is hydraulic throughout. Front wheel drive and rear wheel steer give extremely good traction and maneuverability. Both units made by **Pettibone Mulliken Corp.,** 4701 W. Division St., Chicago 51, Ill.

For more details circle NED-321 H4 on enclosed inquiry slip

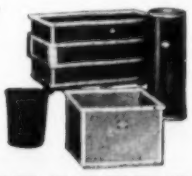
DO YOU KNOW? Electric fork trucks can now be used near radio or radar installations, in plants using two-way radio communications and around electronic equipment. All electrical contact sparking and commutator interference has been eliminated in a line of battery operated power industrial trucks made by Yale & Towne Mfg. Co., Dept. M-1, Roosevelt Blvd. & Haldeman Ave., Philadelphia 15, Pa.

For more details circle NED-322 H4 on enclosed inquiry slip

SIMPLIFY YOUR MATERIALS HANDLING

SEND FOR FREE CATALOG OF FIBRE CONTAINERS

Spaulding Fibre Receptacles make storage and handling easier. They're tough, lightweight, shock-proof, resistant to impact and abrasion, will not splinter or corrode. Boxes, barrels, trays and trucks of all sizes, types and weights. Mail coupon today.



Spaulding

SPAULDING FIBRE COMPANY, INC., Dover, N. H.

Please send me your catalog on Spaulding's complete line of Fibre receptacles.

Name

Firm

Address

City Zone State

For more details circle NED-323 H4 on enclosed inquiry slip

HOLDS NON-MAGNETIC MATERIALS ON MAGNETIC CHUCK

Magna-Vise*

(... a pair of spring-loaded clamps, actuated by magnetic pull of the chuck, hold material firmly against chuck face.)

*Patented

... INCREASES THE USEFULNESS OF YOUR MAGNETIC CHUCKING EQUIPMENT

Try a Magna-Vise and you, too, will agree that savings in set-up time make it worth many times its low cost. Special sizes and shapes for both tool rooms and continuous loading and unloading.

Get details, DEPT. ND-84

Magna-Lock magnetic chucks and devices.

MAGNA-LOCK, INC.

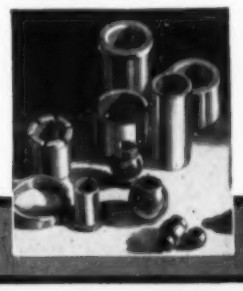
BIG RAPIDS, MICHIGAN, U. S. A

For more details circle NED-324 H4 on enclosed inquiry slip

Can You Use SELF-LUBRICATING JOHNSON LEDALOYL BEARINGS?

IF SO, YOU WILL SAVE MONEY

NEW USES for these porous, oil-impregnated bearings are being discovered every month. You may need them for applications difficult to lubricate. They may even be sealed in place. Made by powder metallurgy, they are very low in cost. Johnson engineers will assist you in determining whether Ledaloyl Bearings can be used to advantage. Write today.



Johnson Bronze

SLEEVE BEARING HEADQUARTERS

580 SOUTH MILL STREET • NEW CASTLE, PA.

For more details circle NED-325 H4 on enclosed inquiry slip

Fewer Packing Styles Required

With new J-M Chempac®

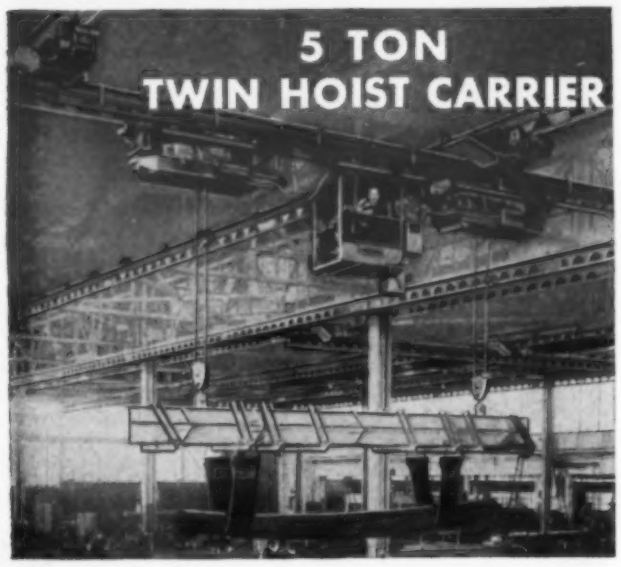
the asbestos-Teflon packing that withstands virtually all chemicals

This new J-M development combines the sealing action and heat resistant qualities of asbestos with the all-around chemical resistance of Teflon. With Chempac, fewer packing styles are needed for chemical equipment because it seals against many acids, alkalies and solvents at temperatures to 500F. Chempac is recommended for packing pump rods and shafts, valve stems, agitator shafts and many other applications. This Teflon-protected asbestos packing is available from your Johns-Manville Distributor. For complete details, phone him or write Johns-Manville, Box 60, New York 16, N. Y. In Canada, 199 Bay Street, Toronto 1, Ontario.

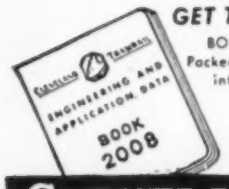
JM

Johns-Manville PACKINGS AND GASKETS

For more details circle NED-326 H4 on enclosed inquiry slip



This cab-operated carrier operates on two 4-runway transfer bridges, providing full handling coverage for an area 152' x 380'. It handles 5 tons of tubing up to 40 feet long. For any handling problem — simple or extensive — check with Cleveland Tramrail.



CLEVELAND TRAMRAIL DIVISION
THE CLEVELAND CRANE & ENGINEERING CO.
6603 East 285th St., Wickliffe, O.

CLEVELAND TRAMRAIL

▲ For more details circle NED-327 H4 on enclosed inquiry slip ▲

Now in its 6th year

NOPAK Shelf-Stock Service...

based on these 2 Standard Mounting, Class 1, Cushioned Cylinders

LIST PRICES F.O.B. Milwaukee, Wisconsin

STOCK STROKE LENGTHS — Double Acting Cylinders

Cyl. Dia. Bore	1"	2"	3"	4"	6"	8"	10"	12"	15"
1½"	24.16	25.72	26.08	26.44	27.16	27.88	28.60	29.32	30.40
2"	26.24	27.88	28.32	28.76	29.64	30.52	31.40	32.28	33.60
2½"	32.36	34.12	34.68	35.24	36.36	37.48	38.60	39.72	41.40
3"	35.04	37.28	37.92	38.56	39.84	41.12	42.40	43.68	45.60
4"	40.84	43.68	44.52	45.36	47.04	48.72	50.40	52.08	54.60
4½"	48.96	51.92	52.88	53.84	55.76	57.68	59.60	61.52	64.40
6"	66.60	70.80	72.20	73.60	76.40	79.20	82.00	84.80	89.00
8"	.....	126.80	129.20	131.60	136.40	141.20	146.00	150.80	158.00

By specifying NOPAK Shelf-stock, you buy quality cylinders at the lowest possible prices, you eliminate waiting for "specials", reduce engineering costs. Compare the prices and scope of NOPAK Shelf-stock (1½ x 1" to 8 x 15") with competitive offerings — and you will specify NOPAK.

● Basic mountings "A" or "E" convertible to "B", "C", "D" or "F", (see below) by changing cylinder heads. Add 10% to above prices, (no extra charge 8" bore). ● Piston Rods NF male thread. ● Cushioning can be eliminated on rod, blank or both ends by removing spring and ball-check.

NOPAK 4-Way Valves, hand, foot, solenoid, or pilot operated, to actuate all cylinders, also in Shelf-stock.

GALLAND-HENNING NOPAK
2755 SOUTH 31st STREET
MILWAUKEE 46, WIS.

NOPAK VALVES AND CYLINDERS
DESIGNED for AIR and HYDRAULIC SERVICE

TEAR OUT THIS AD for Reference — or write for extra copies.

A 8003-½

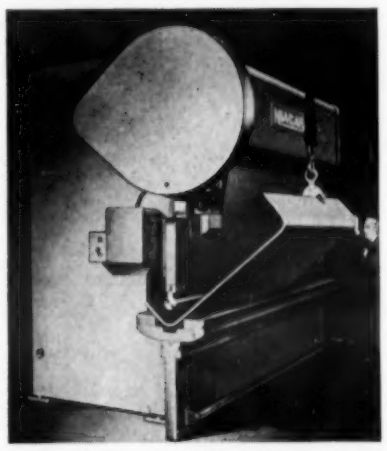
▲ For more details circle NED-328 H4 on enclosed inquiry slip ▲

WATER SAVER CONTROL
for use with resistance welders

Cooling water is conserved and excessive condensation, corrosion and mineral deposits in transformers and other components are prevented when a water saver control is used on resistance welders. Control unit is furnished in a case for application to existing welders and is built into new equipment at the factory. Water flow begins automatically when the welder starts a sequence. If the sequence is not repeated after 3 minutes, water is shut off. Application can be to any welder that makes available an electric signal for each operating cycle. A solenoid operated valve must be installed in the main water supply. Made by **Taylor-Winfield Corp.,** 1056 Mahoning Ave., Warren, O.

▲ For more details circle NED-329 H4 on enclosed inquiry slip ▲

PRESS BRAKES
line covers 50 to 775-ton models



Line of versatile press brakes for forming, bending, punching, blanking and related operations includes models ranging from 50 to 775 tons. Double-end twin drives with double reduction gearing provide uniform power to assure bends with straight-edge accuracy. Frames feature box type crowns for resistance to deflection and permanent alignment of bearings and ram. Laminated nonmetallic ways minimize wear. All gearing is totally enclosed in sealed oil baths. Made by **Niagara Machine & Tool Works,** Northland Ave. & Chelsea St., Buffalo 11, N. Y.

▲ For more details circle NED-330 H4 on enclosed inquiry slip ▲

Radiation Detectors

Minneapolis-Honeywell Regulator Co., Industrial Div.—Four types of Radiamatic radiation detectors for measuring temperatures from 125 to 7000° F are described and their specifications given in 24-page illustrated catalog 9301. General purpose, small target, miniature and low range pyrometers are covered along with their accessories, ElectroniK instruments and millivoltmeter pyrometers.

▲ For more details circle NED-331 H4 on enclosed inquiry slip ▲

NEW BAKER "Yardloader"
4000 LB. GAS FORK TRUCK
COSTS ONLY $2985

Baker Yardloader now brings cost-saving fork truck operation within the reach of practically every company.

Travel speed approaching 14 miles per hour, large pneumatic tires, exceptionally high ground clearance and oscillating trail axle make it the ideal truck for outdoor service over large unimproved or semi-improved areas.

Heavy-duty industrial engine of proven make, 4-speed transmission and extra-heavy drive axle assure ample power.

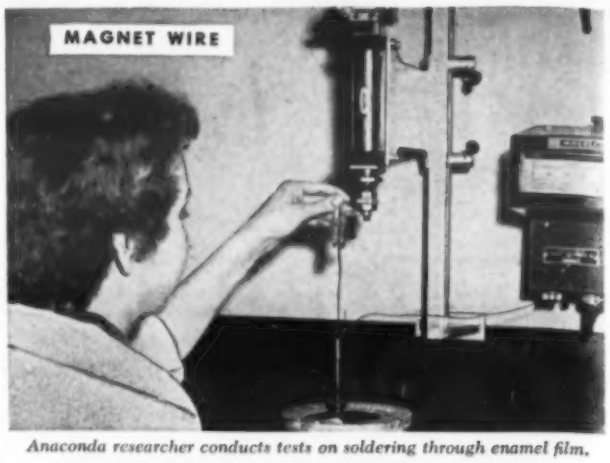
Hydraulic lift to 122 inches, automotive-type steer and excellent driver visibility are a few of the features contributing to safety and ease of operation.

Get all the facts—and save up to $1,000.00 on your next gas fork truck.

Baker industrial trucks

THE BAKER-RAULANG COMPANY
1245 WEST 80th STREET • CLEVELAND 2, OHIO

▲ For more details circle NED-332 H4 on enclosed inquiry slip ▲



Anaconda researcher conducts tests on soldering through enamel film.

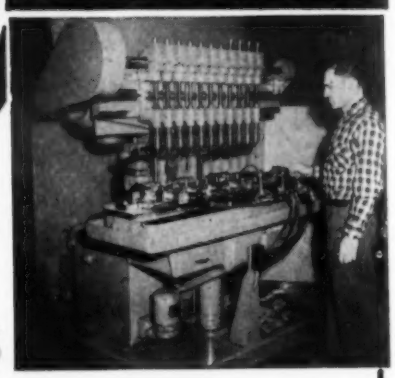
The answer to your soldering problem may be here—at Anaconda!

Soldering problem? A new soldering center was set up some months ago as a part of Anaconda's modern, active Development Laboratory. After months of testing, new facts—accurate, reliable—are beginning to come in. If you have a soldering problem, perhaps we can solve it for you out of the experience of the many laboratory tests and experiments we have already made. Ask your Anaconda Salesman, or write *Anaconda Wire & Cable Company, 25 Broadway, New York 4, N. Y.*

TODAY'S HEADQUARTERS FOR MAGNET WIRE ANACONDA®

▲ For more details circle NED-333 H4 on enclosed inquiry slip ▲

NEW F-406 MULTIPLE METAL DRILLER



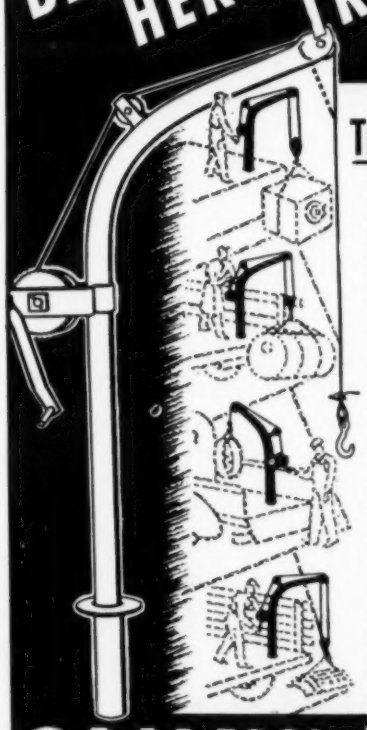
TOPS IN FEATURES

A new, improved, multiple, straight line, precision driller—drills six ⅝" holes in steel, 12 in cast iron, sixteen ¾" holes in brass, sixteen 1" holes in aluminum — has ball bearing spindles — foot control hydraulic feed—micrometer hole depth control—many other features—2 sizes; 6 ft. and 4 ft. drilling length. Write for full information.

B. M. ROOT CO.
YORK — PENNA.

▲ For more details circle NED-334 H4 on enclosed inquiry slip ▲

BLUE HERON TRUCK CRANE SAVES



Time Money Labor

ONE MAN can handle up to ONE TON —EASILY and SAFELY!—with a BLUE HERON TRUCK CRANE. Crane swivels through full circle; one man can lift from socket, leaving truck body clear.

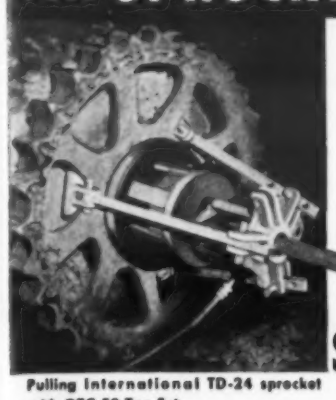
Equip ALL company trucks with sockets. Then change cranes from truck to truck.

CHOOSE THE MODEL WHICH FITS YOUR REQUIREMENTS
Model O.C. 30A Cap. 500#
Model O.C. 30B Cap. 1000#
Model O.C. 30C Cap. 2000#

CAM TOOL CO., INC. 11 RANDWICK AVE. OAKLAND 11, CALIF.

▲ For more details circle NED-335 H4 on enclosed inquiry slip ▲

PULL SPROCKETS IN MINUTES



WITH THE NEW OTC SPROCKET PULLER

Pulling International TD-24 sprocket with OTC 50 Ton Set.

OTC 50 TON Hydraulic Ram with Adaptors pulls or installs on the job or in the shop.

SAVE TIME, LABOR...REDUCE "DOWN-TIME"

OTC 50 Ton POWER-TWIN Hydraulic Ram . . . used for hundreds of tough jobs including the above.

Now the costly job of pulling Crawler-Tractor sprockets can be done in minutes by one man. Manufacturers approved sets are available for, Caterpillar, Allis-Chalmers and International Harvester . . . or a Universal Set to fit all three. If you have a 50 Ton OTC Ram, you need only the adaptors . . . three types of pumps available.

SEND FOR FREE FOLDER

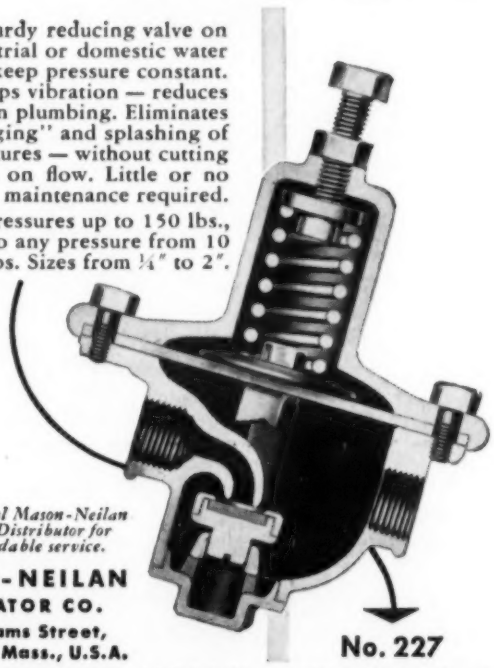
OWATONNA TOOL COMPANY
436 Cedar Street • Owatonna, Minnesota

For more details circle NED-336 H4 on enclosed inquiry slip

STEP DOWN WATER PRESSURE
Quietly, Smoothly
WITH
MASONEILAN
Water Reducing Valves

Put this sturdy reducing valve on industrial or domestic water lines to keep pressure constant. Stops vibration — reduces strain on plumbing. Eliminates "singing" and splashing of fixtures — without cutting down on flow. Little or no maintenance required.

Initial pressures up to 150 lbs., reduced to any pressure from 10 to 100 lbs. Sizes from ¼" to 2".



No. 227

Call your local Mason-Neilan Industrial Distributor for fast, dependable service.

MASON-NEILAN REGULATOR CO.
1189 Adams Street,
Boston 24, Mass., U.S.A.

For more details circle NED-337 H4 on enclosed inquiry slip

Speedways Conveyors
NEW Speed TABLE
The power belt conveyor with Custom-specified utility at Standard-line prices

10 foot increments easily bolt together. Powerful SpeedDrive motor can be located in any section of line.

for inspection line • assembly line • work tables
order make-up conveyor • shipping-receiving conveyor

All or any of these operations can be accomplished with a single Speedtable installation. This is the exciting feature of SpeedTABLE for it has a flexibility of use . . . it can easily be lengthened or shortened, disassembled and set up again in other areas of your plant to do many duties.

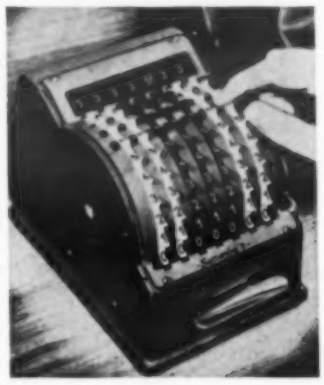
It is a revolutionary idea in belt conveyor design . . . that can revolutionize your materials handling methods. Write for complete details and low, low prices today. Ask for new SpeedTABLE BULLETIN C345

SPEEDWAYS CONVEYORS

202 Rhode Island St. Buffalo 13, N. Y.

For more details circle NED-338 H4 on enclosed inquiry slip

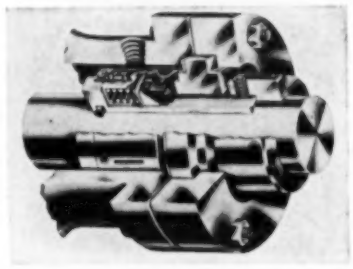
ADDING MACHINE
is compact seven-figure machine



All the functions of a more costly unit can be performed on this relatively inexpensive adding machine. It features direct subtraction where result appears immediately in total-result dial after one simple operation. Machine has visible total and individual entry dials, plus clearing bar action which eliminates crank handling after each individual entry. It totals to 9,999,999 and has dollar and cents signs in total dial. Keys are finger contoured for easy operation. Price is $39.50. Distributed by **Summira Adding Machine Co.**, Dept. SA, 3851 W. Madison St., Chicago 24, Ill.

For more details circle NED-339 H4 on enclosed inquiry slip

MECHANICAL SHAFT SEAL
installs easily on split-case pumps



Sleeve mounting and outside clamping ring of type 9 mechanical shaft seal permit quick installation or removal on most split-case pumps. Seal can be fitted without unbolting the top of the horizontal split shell. Seal is unaffected by practically all corrosive liquids at temperatures up to 500° F. Flexible sealing members are Teflon. Springs and metal parts can be furnished to required metallurgical specifications. Sizes are also available to specification. Made by **Crane Packing Co.**, Dept. NDC, 1800 Cuyler Ave., Chicago 13, Ill.

For more details circle NED-340 H4 on enclosed inquiry slip

COOLING SYSTEM THERMOSTAT
calibration unaffected by pressure

Wax-like composition used to charge Power-Pill thermostat permits operation unaffected by pressures built up in pressurized coolant systems. Its use in engines and general industrial applications permits cooling system to operate at normal temperatures. Made by **Robertshaw-Fulton Controls Co.**, Fulton Sylphon Div., Box 400, Knoxville, Tenn.

For more details circle NED-341 H4 on enclosed inquiry slip

STOP RUST
before it starts

with ACB PRIMER

Once rust starts, you have a constant, costly battle. Seal iron or steel with fast-drying, moisture-proof, paint-anchoring ACB Primer for long-lasting protection. Users report up to 50% savings in repainting costs.

FREE! Your business letterhead request brings a copy of "The Barrier Against Rust". Get the facts on true rust prevention—write today!

THE TROPICAL PAINT & OIL COMPANY
1124-1266 W. 70th St., • Cleveland 2, Ohio
HEAVY-DUTY MAINTENANCE PAINTS SINCE 1883

For more details circle NED-342 H4 on enclosed inquiry slip

YOU GET TRUSTWORTHY LIQUID or GAS COOLING
Plus Great Water Saving

● With the NIAGARA AERO HEAT EXCHANGER you can cool air, gas, water, oils, chemicals, jacket water for engines or process equipment. You get lower costs and really accurate control of temperature. You have a closed system of cooling, free from dirt and maintenance troubles.

The Niagara Aero Heat Exchanger uses atmospheric air to cool liquids and gases. Great saving in cooling water, piping and pumping and power return the cost to you quickly.

Write for Bulletin No. 120

NIAGARA BLOWER COMPANY
Dept. ED, 405 Lexington Ave., New York 17, N. Y.

For more details circle NED-343 H4 on enclosed inquiry slip

Better rubber products are made with Du Pont NEOPRENE

Neoprene-jacketed wiring is still intact after six years' exposure to moisture, heat and chemicals

Wiring at the "wet end" of any paper mill is subjected to proving-ground conditions—and the case of North Carolina's Ecusta Paper Corp. is typical. Here, hot steamy air and exposure to chlorine, caustic soda and other chemicals cut the service life of Type RW wiring jacketed with saturated cotton braid to five years.

Then Ecusta tried wiring jacketed with Du Pont neoprene, and failures became practically unknown. The rugged neoprene covering resists deterioration so well that the wiring is still in excellent condition after *six years' service!* Daily hosings haven't damaged it . . . long exposure to heat has caused no cracking or softening. Ecusta expects many more years of trouble-free performance—and now uses neoprene-protected wiring exclusively in all "wet locations."

Adding years to the life of electric wiring is just one of the many ways neoprene is helping industry cut maintenance and replacement costs. Other rubber products . . . such as hose, belting, gloves, and gaskets, when made of neoprene...make possible similar savings. Although Du Pont makes no finished goods of neoprene, your rubber goods supplier will be glad to give you complete details about the neoprene products he sells.

FREE! THE NEOPRENE NOTEBOOK

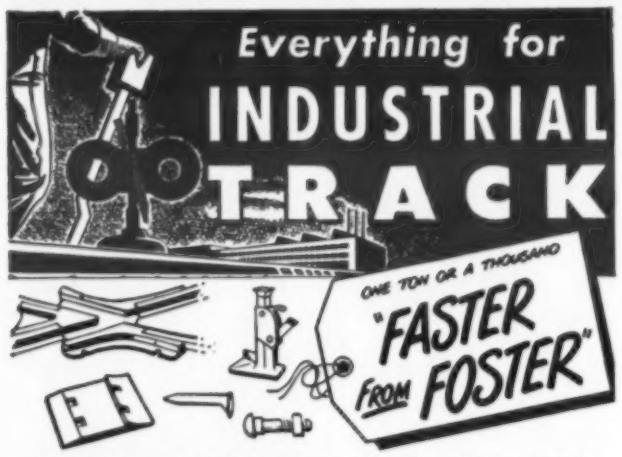
Each issue describes new neoprene products . . . improved old products . . . tips on reducing maintenance costs. Write today for your free subscription. E. I. du Pont de Nemours & Co. (Inc.), Rubber Chemicals Div. NE-8, Wilmington 98, Delaware.

NEOPRENE
The rubber made by Du Pont since 1932

DU PONT
REG. U. S. PAT. OFF.

BETTER THINGS FOR BETTER LIVING . . . *THROUGH CHEMISTRY*

For more details circle NED-344 H4 on enclosed inquiry slip



Need Rails—Switches—Frogs—Guard Rails or Track Tools? For best selections and prompt deliveries—try FOSTER—shipments of most items can be made from stocks in our five nationwide warehouses.

RAILS—New and Relaying Foster stocks are being replenished daily. Any items we did not have last week, we'll probably have next week. We match specifications and sizes to meet all your requirements on any job, new installations or replacements. *Call on Foster for all your needs for Industrial Track Equipment and Supplies.*

Write for Track Equipment Bulletin NE-8

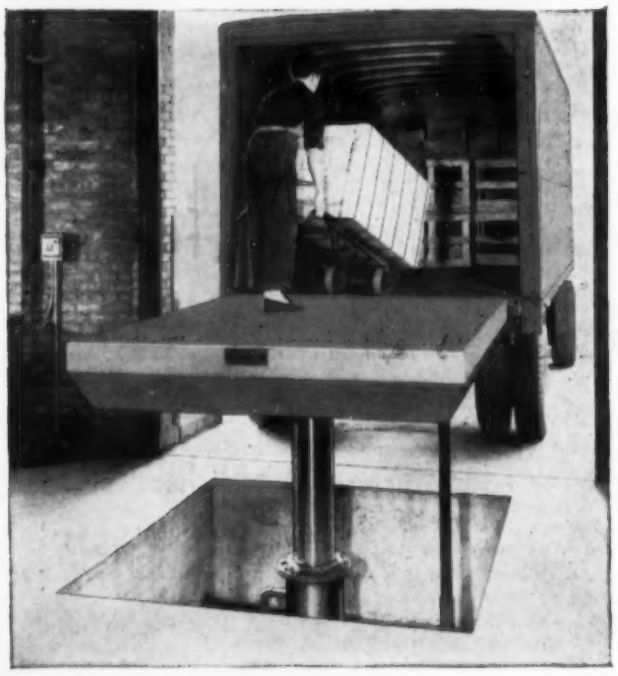
L.B. FOSTER co.

CHICAGO 4, ILL. HOUSTON 2, TEX.
PITTSBURGH 30, PA. NEW YORK 7, N.Y.

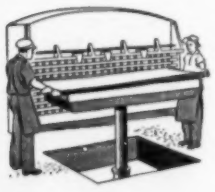
For more details circle **NED-345 H4** on enclosed inquiry slip

Rotary LEVELATOR® Lifts

HANDLE HEAVY LOADS FASTER AND CHEAPER



Adaptable To Many Uses—Use economical Oil-draulic power to lift loads from plant floor to trucks, machines or different building levels. Rotary Levelator Lifts speed plant traffic, cut labor costs. Save plant space too . . . often eliminating need for loading docks.



Machine Feeding—Used for machine feeding, Levelator Lifts are time-savers, cost-savers. They lift loads faster and cheaper than men or makeshift methods and keep materials at the right height for continuous feeding.

Levelator Lifts are built for specified loads up to 80,000 lbs., travel up to 6 ft., speed as desired. When lowered, platform recesses into floor and can be trucked over. Powered by economical compressed air or hydraulic power unit.

MAIL COUPON FOR CATALOG

ROTARY LIFT CO.,
1170 Kentucky, Memphis 2, Tenn.
Send complete information on
Levelator Lifts to:

Name.....

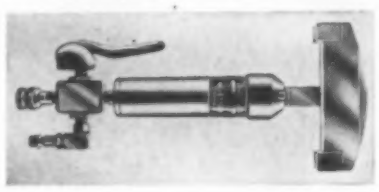
Address.....

.....

Rotary **LEVELATOR® LIFTS**

For more details circle **NED-346 H4** on enclosed inquiry slip

COILED-ROD STRAIGHTENER
prepares rod end for drawing dies



Leading end of heavy coiled rod ranging from 9/16 to 1 1/16-in. diameter can be straightened for insertion into drawing dies or cold heading machines by this Guillotine rod straightener. Placed on rod end, portable unit straightens an 8-in. section by application of 10 tons hydraulic thrust. By successive applications, 4-ft lengths can be straightened in about 15 seconds. Operation can be controlled by either hand or foot valve. Unit is powered by 2-hp electric hydraulic pump. Straightener head weighs 18 lb. Made by **Manco Mfg. Co.**, Washington St., Bradley, Ill.

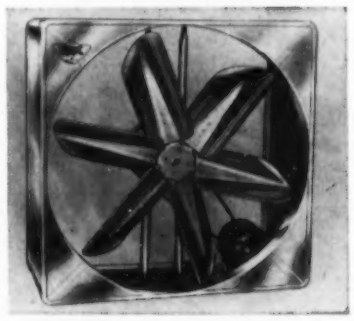
For more details circle **NED-347 H4** on enclosed inquiry slip

SOLENOID VALVE
stainless steel for high pressures

Stainless steel series 4000 pilot operated solenoid valve is available in ½ and ¾-in. models rated to 2500 psi and 1½-in. model to 3000 psi. Piston rings compensate for expansion under heat and eliminate sticking. Valves are available for normally open and normally closed operation with bubble tight pilot valve feature. Explosionproof housings are optional for use in hazardous atmospheres. Coils are available with any desired voltage with silicone impregnated insulation for operation above 180° F. Made by **Atkomatic Valve Co.**, Dept. S203, 545 Abbott St., Indianapolis 25, Ind.

For more details circle **NED-348 H4** on enclosed inquiry slip

VENTILATING FANS
3850 to 10,000 cfm air movement



Four six-bladed ventilating fans added to Airate line have blade diameters from 24 to 38 in. and move from 3850 to 10,000 cfm of air. They are belt driven, housed in a steel cabinet and can be supplied for either horizontal or vertical operation. Accessories include automatic wall or ceiling shutters, two-speed motors, front and rear guards. Made by **Air Controls, Inc.**, 2300 Superior Ave., Cleveland 14, O.

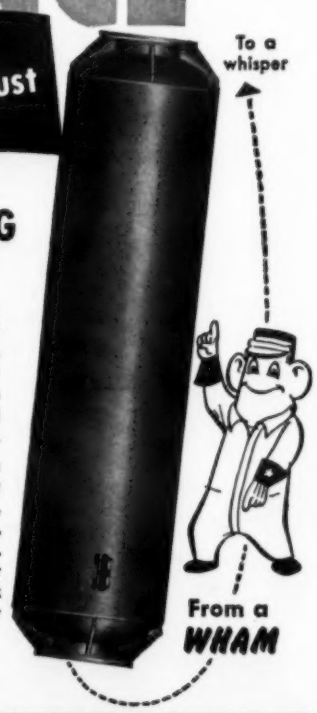
For more details circle **NED-349 H4** on enclosed inquiry slip

SILENCE

Those Costly Intake and Exhaust NOISES

with

BURGESS-MANNING SNUBBERS



They signal inefficient performance of your equipment and may cost you thousands of dollars annually in errors through faulty oral communications, needless nerve strain and fatigue, and result in poor neighbor relations.

Install Burgess-Manning Snubbers to scientifically silence exhaust noises from diesels, gas engines, jets, turbines, steam discharges, vacuum pumps and compressors. They offer plus values of air cleaning, heat recovery, spark arresting, surge control and water separating where required.

We invite you to submit your problems for recommendations —no obligation.

BURGESS-MANNING COMPANY

755 East Park Avenue Libertyville, Illinois

For more details circle **NED-350 H4** on enclosed inquiry slip

NEW ADJUSTABLE DRILL JIG
eliminates layout; cuts drilling time

Used for drilling holes through round stock and hex stock from ¼" to 2" and cap screws from ¼" to 1¼", the new Mathewson Adjustable Drill Jig eliminates layout and can cut drilling time on small lots to a fraction. And it eliminates the costs of special jigs for larger quantities. Holes for cotter pins, set screws, drive pins for bayonet joints, oil holes in tubular sections, and wiring holes in cap screws, are all typical of the operation that can be done more economically with this jig. Hole diameters range from .052" to .531", using your A.S.A. standard slip bushings. The hardened V-block has two 60-degree V's for centering round or hexagonal stock, one for ¼" to 21/32" diameter, one for 21/32" to 2" diameter. Adjustable stop for locating work longitudinally for drilling any distance from end, may be used on either side. Adjustable bushing carriers hold slip bushings and clamp work securely. Jig highly successful in permitting use of inexperienced drill operators. For circular write to: **Mathewson Machine Works**, 22 Hancock St., Quincy, Mass. *Advt.*

For more details circle **NED-351 H4** on enclosed inquiry slip

Read why CONNEAUT

can give you faster, more efficient service on custom *plastic*

EXTRUSIONS

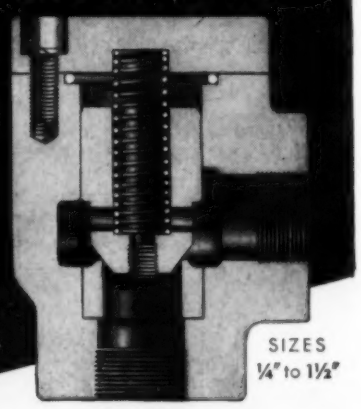
Our service can be all or any part of a complete "package" from special compounding to meet tough design specifications, to production runs to meet your delivery requirements. Write for fully illustrated brochure CR-53 containing complete details of our plastic extruding experience and facilities. If you have an extrusion problem needing immediate attention, send drawings and data for analysis and recommendations. No obligation. 429D

CONNEAUT RUBBER & PLASTIC COMPANY
Conneaut, Ohio

For more details circle **NED-352 H4** on enclosed inquiry slip

RIVETT

Hydraulic check valves



PIPE THREAD OR FLANGE CONNECTED

SPRING CLOSED OR PILOT OPERATED

MOUNTED IN ANY POSITION

3000 P.S.I.

SIZES ¼" to 1½"

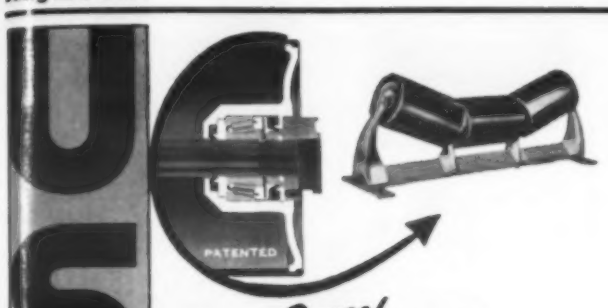
Model 8640, Spring Closed • Model 8642, Pilot Operated
Model 8644, Pilot Operated with Pressure Breaker

Allow free flow in one direction, but prevent flow in opposite direction. Large areas through valve permit unusually large volume. Ex: 1½" valve has 104.2 G.P.M. capacity at 15 ft. per sec.

Call Your Local Rivett Dealer Or Write Direct

RIVETT LATHE & GRINDER, Inc., Dept. NED8, Brighton 35, Boston, Mass.
Rivett Furnishes A Complete Power Package

For more details circle **NED-353 H4** on enclosed inquiry slip



USE

Saves Grease! Saves Labor! Saves Belts!

If You Use Belt Conveyors You Need

CONTINENTAL IDLERS

- UNIT-SEALED
- TIMKEN BEARINGS
- PRE-LUBRICATED

Write for Bulletin NED-116

ALL SIZES! ALL TYPES! CG-5301

INDUSTRIAL DIVISION
CONTINENTAL GIN COMPANY
Birmingham 2, Ala.
ATLANTA • DALLAS • MEMPHIS • NEW YORK

For more details circle NED-354 H4 on enclosed inquiry slip

NEW MODEL C-1 Diskette

THE SUPERIOR, HIGH-SPEED PRODUCTION TOOL!

Free spindle speed of 8500 RPM means faster, more uniform work on metal, plastic or wood in regular production use or for maintenance.

Compact, lightweight design means the Diskette is easier to use, less tiring to the operator. And, because of its high speed operation, there's no need to bear down. Just a light touch, and the machine will do the rest!

Positive control of its cutting action is assured because you hold the power in the palm of your hand. You need no knobs, handles or brackets to guide the Diskette.

BEST OF ALL you can use your Diskette for many different jobs . . . grinding, rotary filing, hole polishing, deburring, sanding, sharpening . . . a special attachment is available for converting the Diskette to a fixed bench machine.

DISKETTE SPECIFICATIONS—average free speed—8500 RPM . . . motor—Universal, AC-DC, 110V. . . . weight—approx. 5 lbs. . . . overall length—9⅝" . . . outside diameter—2¾" . . . disc capacity—4" . . . chuck, ¼", collet type . . . cooling fans—double action.
Complete accessories are available, including safety guards.

Write today for your free illustrated literature and price list.

FRANKLIN BALMAR CORPORATION
Woodberry, Baltimore 11, Maryland
5001 N. Wolcott Ave., Chicago 40, Ill.

DEALERS: Write for open territory details

For more details circle NED-355 H4 on enclosed inquiry slip

Brainard Strapping Tape

SPEEDS PACKAGING AND REINFORCING

• Streamline your package closing, reinforcing, bundling, holding, and palletizing with Brainard Strapping Tapes—either pressure-sensitive or gummed. Brainard offers a complete line of dispensers, like the hand dispenser shown above, which permits fast tape application, holds rolls up to 8" in diameter and has a patented corrugated cut-off blade. Brainard's complete Strapping System includes steel strapping and strapping tapes—assuring you of unbiased recommendations.

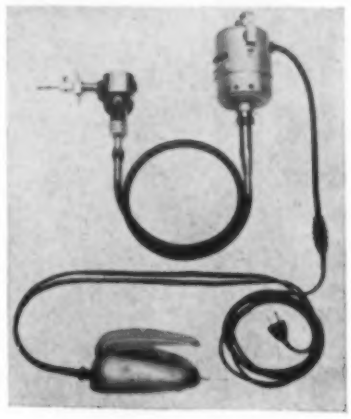
Brainard
STEEL DIVISION
SHARON STEEL CORPORATION

For booklet write:
BRAINARD STEEL DIVISION
Dept. HH-8, Griswold Street
Warren, Ohio

For more details circle NED-356 H4 on enclosed inquiry slip

PORTABLE PRECISION FILER

flexible shaft drive unit gives speed range of 0 to 15,000 rpm



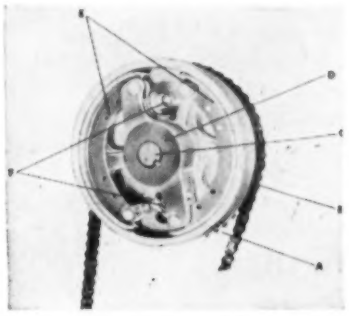
With the added power of a new precision driving unit, flexible shaft Di-Profiler operates at any desired speed from 0 to 15,000 strokes or rpm, depending upon whether rotary or reciprocating fixture is used. By attaching profiler to drill press or lathe carriage, it can be used for fine filing and finishing without fear of breaking tools since compensating spring allows full depth filing without strain on any working part.

Improved foot control rheostat does not overheat, even with continuous use of profiling tool. This improved tool is 5½ x 4¾ x 2 in. and has ball bearing spring clip assembly to flexible drive shaft. Complete Di-Profiler outfit includes such standard accessories as buff rod, chuck fixture, Allen wrench and bottle of fine oil. Wooden cabinet has sliding shelves. Made by **Nord International Corp.**, 449-D Central Ave., Orange, N. J.

For more details circle NED-357 H4 on enclosed inquiry slip

SAFETY FRICTION CLUTCH

slippage begins with slight overload on adjustable unit

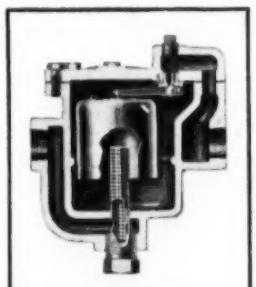


Regardless of the load being transmitted, the slightest overload on this safety friction clutch will cause the clutch to slip until the obstruction is removed. Unit was originally designed for use on washing, pickling, drying and phosphatizing machines made by this company, but is now available for incorporation into other equipment. Drive sprocket A is bolted to drum B and this assembly floats on driven shaft C.

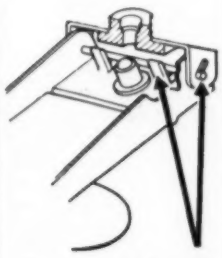
Spider D is fastened to the shaft by a key, and brake shoes E are pivoted at one end to the spider. At opposite end of each shoe the adjustment clevis F holds the shoe in place and is guided by a hole in the spider. Power is transmitted through a roller chain to the sprocket through the brake shoes and spider to the driven shaft. Slight adjustment of nuts on adjustment clevises gives sufficient pressure against the drum to carry extremely heavy loads. Made by **Metalwash Machinery Corp.**, 913 North Ave., Elizabeth 4, N. J.

For more details circle NED-358 H4 on enclosed inquiry slip

NEW TRAP



Sarco *Camlift* Bucket Trap



Cams lever valve off seat; slot and pin provide maximum valve opening

handles more volume in less time!

Sarco uses the principle of the fulcrum and lever in this newly designed trap and gives you greater discharge at no increase in trap size. Result: more for your steam trap dollar.

It's all made possible by the Sarco *Camlift* valve mechanism which provides the force needed to open the large valve without a corresponding increase in trap size.

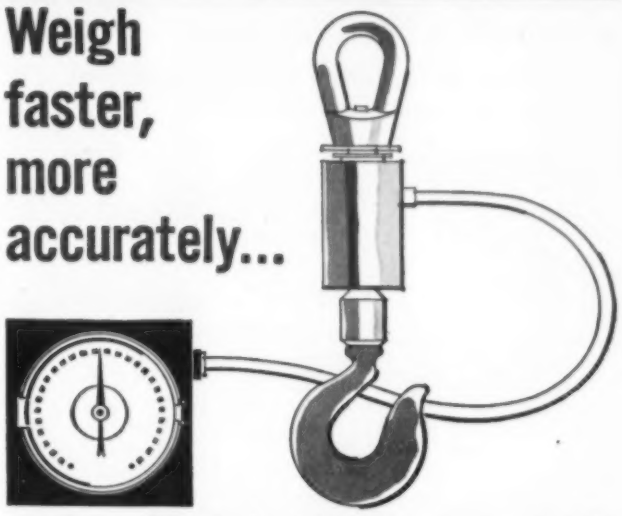
See for yourself how this small inverted bucket trap gives you maximum capacity.

Write for free trial trap giving pipe size, capacity, and pressure conditions.

SARCO COMPANY, INC.
EMPIRE STATE BUILDING, N. Y. 1, N. Y.

For more details circle NED-359 H4 on enclosed inquiry slip

Weigh faster, more accurately...



with a Baldwin SR-4® crane scale

A simple unit, this new electrical weighing device consists of the SR-4 pick-up, the instrument, and cable reel if required. The portable crane scale is simply hung on your crane hook.

The electrical signal can be transmitted to indicators, recorders, or printers located either in the crane cab or at any other convenient spot in the plant.

For further information write for our new bulletin on crane scales. Address Dept. 3129, Baldwin-Lima-Hamilton Corporation, Philadelphia 42, Pennsylvania.

BALDWIN-LIMA-HAMILTON
Philadelphia 42, Pa. • Offices in Principal Cities
In Canada: Peacock Bros., Ltd., Montreal, Quebec

For more details circle NED-360 H4 on enclosed inquiry slip

For more details circle NED-361 H4 on enclosed inquiry slip

FAST NEW POLISHING TOOL

Expanding slotted rubber wheel uses inexpensive abrasive belts, sleeves

Low-cost polishing and finishing with abrasive belts, sleeves and bands by CARBORUNDUM is now possible... using a newly-developed Expanding Slotted Rubber Wheel which holds the abrasive element in place by centrifugal force alone. Slots in the resilient rubber face allow expansion of the wheel head at the recommended operating speeds, and the force of the expansion is sufficient to hold the belt, sleeve or band firmly while grinding. On many operations, this new wheel can replace set-up wheels... completely eliminating the long and costly preparation of the latter. Another advantage of the Expanding Wheel is the ease with which you can reverse the abrasive element whenever polishing or finishing must be done with one side of the wheel. Stopping the wheel loosens the abrasive... no mechanical device is used. Starting the wheel tightens it in place. Every bit of the abrasive can be used. There is no tendency for the sleeve, belt or band to "walk" sideways on the wheel as long as recommended wheel speeds are followed. Expanding Slotted Rubber Wheels are available in diameters from 1" through 8", in various widths up to 8" (widths normally do not exceed diameters). Write for complete information to **The Carborundum Company,** Dept. NED-82-410, Niagara Falls, New York. Or use the inquiry form provided by this publication.

"Carborundum" is a registered trademark of The Carborundum Company, Niagara Falls, New York

82-410

▲ For more details circle **NED-362 H4** on enclosed inquiry slip ▲

A Stockroom You Can Build Yourself!

SECTIONAL STACKBINS® give you the greatest flexibility and ease of installation ever devised for parts, tools, materials storage containers. You can set them up in minutes without tools! By combining bin sizes and number and size of openings, you get a storage system tailored to fit your particular needs. SECTIONAL STACKBINS give you maximum storage utility in minimum space. Available in 6 interstacking sizes.

For full information and prices, WRITE TODAY!

STACKBIN CORPORATION
1081 Main St., Pawtucket, R. I.
Mfd. & sold exclusively in Canada by: Wickware-Stackbin, Ltd., Ottawa

STACKBIN® SYSTEM
"Stacked and Still Accessible"

▲ For more details circle **NED-363 H4** on enclosed inquiry slip ▲

RUGGED, DEPENDABLE, ACCURATE GAUGES *For Every Purpose*

If you have requirements for pressure, temperature, flow, level or electrical measuring instruments, for the products you make or for manufacturing operations, it will pay you to consult with U.S. Gauge, the world's largest manufacturer of accurate instruments.

Write today and tell us about your requirements.

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Division of American Machine and Metals, Inc.
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Please send literature checked:
☐ Cast Case Gauges ☐ Test Gauges ☐ Thermometers
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Name _____ Title _____
Company _____
Address _____ City _____ State _____

▲ For more details circle **NED-364 H4** on enclosed inquiry slip ▲

FLOOR MARKING MACHINE

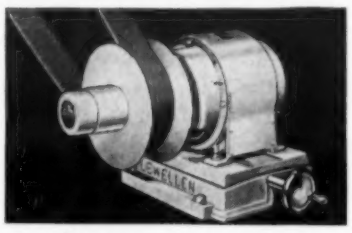
new model has rubber tired wheels

Quieter operation over all surfaces and easier handling result from substitution of two 7 x 1.25 semipneumatic rubber tires for aluminum wheels on the standard Florline marking machine. Like the 6-in. aluminum wheel model which is still available, it makes parking and safety lines at walking speed. Both have a retractable third wheel which acts as a line guide 18-in. forward of the carriage. Made by **H. C. Sweet Co.,** 24396 W. Seven Mile Rd., Detroit 19, Mich.

▲ For more details circle **NED-365 H4** on enclosed inquiry slip ▲

VARIABLE PULLEY

provides up to 4:1 speed ranges

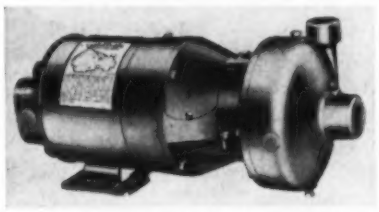


Ratings from fractional to 15 hp are available in redesigned line of variable speed pulleys, each size scaled to all present and new NEMA motor frames. Overhung load has been reduced 50 per cent and space requirement 40 per cent. Speed ranges of 2¼ to 1, 3 to 1 and 4 to 1 are offered, along with companion bases, countershafts and variable pulley belts for obtaining wide range of machine speeds and center distances. Mounting can be on either a horizontal or vertical motor shaft, driving a flat or crown face pulley or a sheave at the machine shaft. Made by **Lewellen Mfg. Co.,** Dept. NED, Columbus, Ind.

▲ For more details circle **NED-366 H4** on enclosed inquiry slip ▲

WATER PRESSURE BOOSTER

installed in low pressure areas



Low water pressure can be increased by the Pressure Booster, installed directly in the lead-in pipe from the water main. Available in capacities to 1200 gpm using motors up to 75 hp, unit is a centrifugal pump of corrosion resistant bronze construction. It is operated automatically by a switch which detects changes in water pressure. Made by **Bell & Gossett Co.,** 8202 N. Austin Ave., Morton Grove, Ill.

▲ For more details circle **NED-367 H4** on enclosed inquiry slip ▲

HOW TO SAVE MATERIAL AND LABOR IN PIPING LAYOUTS

Here is a special fabricating service designed to save time, material and labor in piping systems. By eliminating numerous flanged joints and combining several fittings into one integral unit, as illustrated, Naylor fabrications provide the answer for greater efficiency and economy.

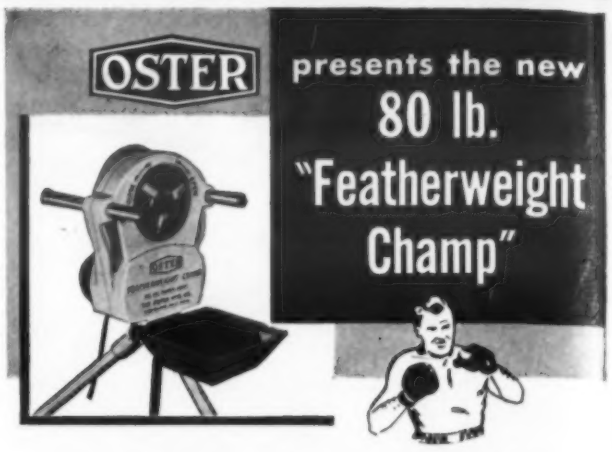
All types of materials can be fabricated accurately to your specifications. Sizes range from 3" to 44" in diameter and wall thicknesses up to ⅜".

Naylor Bulletin No. 525 presents helpful information on this special service. Write for your copy today and submit your problem for recommendation and quotation.

NAYLOR PIPE

Naylor Pipe Company • 1247 East 92nd St., Chicago 19, Illinois
Eastern U.S. and Foreign Sales Office 350 Madison Ave., New York 17, N.Y.

▲ For more details circle **NED-368 H4** on enclosed inquiry slip ▲



The all new Oster "Featherweight Champ", a Power Drive for Hand Pipe Tools, weighs only 80 pounds. One man can move it and use it with ease . . . yet the "Featherweight Champ" is exceptionally sturdy and powerful. Ideal for "on the spot" threading, its range is ⅛" to 2", and it is available with either electric or gasoline power.

For the full story on the "Featherweight Champ" see your local Oster Distributor.

THE OSTER MANUFACTURING CO.
Main Office and Factory:
2066 East 61st St. • Cleveland 3, Ohio

Builders of Cost Reducing Threading Equipment Since 1893

▲ For more details circle **NED-369 H4** on enclosed inquiry slip ▲

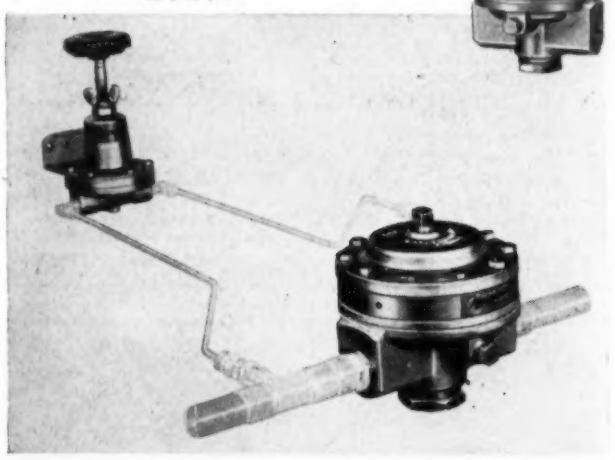
Norgren

PILOT-CONTROLLED PRESSURE REGULATORS

give you greatest performance for cost and size

INTEGRAL TYPE ½", ¾", 1"

REMOTE CONTROL TYPE ½", ¾", 1"



MORE CAPACITY—MORE ACCURACY

Extremely accurate, automatic pressure regulation, with capacities up to 250 cfm (more if needed). Large fluctuation in flow and primary pressure have negligible effect on regulated air pressure. Examples: the secondary pressure remains constant at 30 psi. with an 80 psi. primary pressure and flow varying from 0 to 200 cfm. Secondary pressure remains constant at 30 psi. with flow of 60 cfm. with primary pressure varying from 50 to 120 psi. Essential equipment for higher quality of machine output at a faster rate of production and at lower unit costs.

WRITE FOR COMPLETE DATA

C. A. Norgren CO.
3405 So. Elati, Englewood, Colo

VALVES • FILTERS
REGULATORS • LUBRICATORS • HOSE ASSEMBLIES

▲ For more details circle **NED-370 H4** on enclosed inquiry slip ▲

AGASTAT

Compact . . . Dust-Proof

TIME DELAY RELAYS

solenoid actuated—pneumatically timed

Introduces time delays into a-c or d-c circuits. Easily adjusted to provide delays ranging from 0.1 second to five or more minutes.

The AGASTAT is small, light, and operates in any position. Dust-proof timing chamber assures long operating life with a minimum of maintenance.

Write for Bulletin. Dept. A1-85

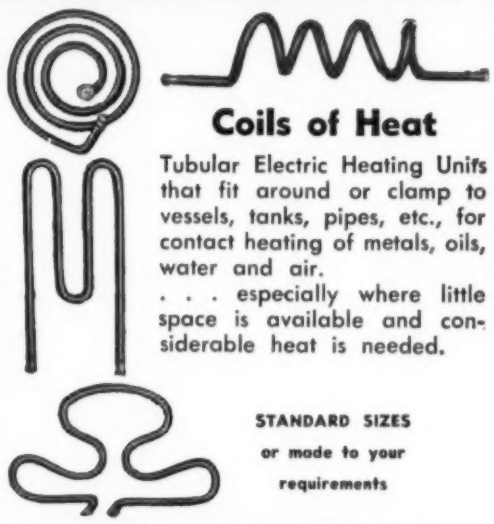
AGA

Division of Elastic Stop Nut Corporation of America
1027 Newark Avenue, Elizabeth 3, New Jersey

For more details circle **NED-371 H4** on enclosed inquiry slip

VULCAN

ELECTRIC HEATING UNITS



Coils of Heat

Tubular Electric Heating Units that fit around or clamp to vessels, tanks, pipes, etc., for contact heating of metals, oils, water and air.

. . . especially where little space is available and considerable heat is needed.

STANDARD SIZES or made to your requirements

VULCAN ELECTRIC COMPANY
DANVERS 7, MASS.

EXPERIENCED SPECIALISTS IN ELECTRIC HEAT

Makers of Vulcan Electric Soldering Tools, Electric Solder Pots, Electric Branding Irons, Electric Heating Units and Electric Heating Devices.

For more details circle **NED-372 H4** on enclosed inquiry slip

makes the Solid Arbor obsolete

CHAMPION
E-X-P-A-N-D-I-N-G
MANDRELS

The expanding sleeve, mounted on tapered arbor, expands automatically to fit the hole. Inserted by hand—no arbor press needed. Always an exact, positive, concentric fit. Locked by a single mallet blow. Unlocked the same way. CHAMPION Expanding Mandrels are used in machine shops around the world. Save time, cut production costs, whether the job calls for machining one piece or a thousand.

Precision Model has expansion range of .010". Available in regular sizes to fit holes from ½" to 3" diam. Holds work to tolerances of .0002" run-out. Guaranteed for precision grinding, turning and milling operations.

Standard Model maintains close tolerances, handles material of any length bore, hard or soft metals—from thin tubes and bushings to heavy castings and forgings. A set of fourteen will fit every hole from ½" to 9½" diam.

CHAMPION *Expanding Mandrels can be made in special shapes and sizes to fit any specifications. Quotations on request. Write for descriptive folder today.*

WESTERN TOOL & MFG. CO., INC.

Our 53rd Year • Dept. 29 • Springfield, Ohio

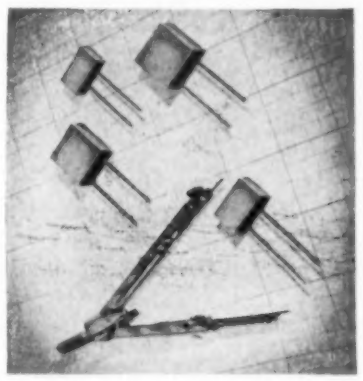
For more details circle **NED-373 H4** on enclosed inquiry slip

NYLON HAMMER-HEAD CAP
fits ball peen and claw hammers

A standard ball peen or claw hammer can be converted into a nylon hammer for working on wood, glass, plastic or soft metals with this nylon head cap. It will not chip and does not interfere with hammer balance. Cap eliminates rebound and handle vibration. Two sizes, SP-8 and SP-16, fit 8 and 16-oz hammers, respectively. Three additional sizes fit standard 4-6, 12 and 24-oz hammers. Injection molded cap is made by **Lempco Automotive, Inc.,** Dept. N, Cleveland 27, O.

For more details circle **NED-374 H4** on enclosed inquiry slip

MIDGET MICA CAPACITORS
encapsulated high capacitance units



Super Micacon encapsulated midget mica capacitors house five to six times the capacitance of CM-20 and CM-30 cases, occupy about one-third the space for the same capacitance and withstand severe humidity tests. Type 5A measures 51/64 x 15/32 x 7/32 in. and is made in capacities up to 5100 mmf, while type 1A is 53/64-in. square x 9/32-in. and is made in capacities up to 20,000 mmf. Both have flat clinched wire leads. Made by **Cornell-Dubilier Electric Corp.,** 1047 Hamilton Blvd., South Plainfield, N. J.

For more details circle **NED-375 H4** on enclosed inquiry slip

NESTING TOTE BOXES
of vulcanized fiber construction

Four steel lugs are riveted to the tapered sides of these nesting type tote boxes for general materials handling to eliminate possibility of jamming. Boxes are lightweight and are fabricated from vulcanized fiber. They have reinforcement at corners and other stress points. Made by **William Bal Corp.,** 2A Johnson St., Newark 5, N. J.

For more details circle **NED-376 H4** on enclosed inquiry slip

TINNERMAN TUBULAR-TYPE
Speed Clips®

. . . save up to 50% on Assembly Costs in "blind" attachments

Tubular type SPEED CLIPS provide fast, efficient, vibration-proof attachments. They are used with unthreaded studs, or rivets; are available in a wide range of sizes. Snapped into place by hand, they virtually nail panels together. An ideal fastener where only one side of the assembly is accessible; perfect for attaching name plates, grilles, decorative trim. See your local Tinnerman representative for full information on Tinnerman SPEED NUT Brand Fasteners, or write direct to:

Insert SPEED CLIP into hole; Spring Steel prongs compress, then spring out after fully inserted, holding Clip in position.

Line up second part of assembly and start rivet into SPEED CLIP.

Seated rivet is engaged as turned-in end of SPEED CLIP "bites" rivet to lock it securely.

TINNERMAN PRODUCTS, INC.
Dept. 12, Box 6688, Cleveland 1, Ohio

For more details circle **NED-377 H4** on enclosed inquiry slip

Makes **"Women's Work"** of Handling **DOUBLE-FACED PALLETS**

Magic "Toggle-Booster" floats the truck into the pallet with minimum jolt or jar.

Easiest, quickest way to handle palletized loads—for short hauls, spotting loads or in congested areas. Just roll the truck into the pallet, lift the load and roll it away. Short stroke pump projects rear wheels through bottom face of pallet—lifts any load up to 4000 lbs. easily.

*Write for Circular 411.

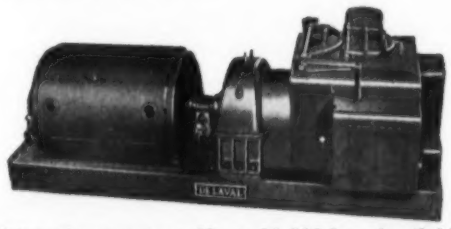
THE Olson CORPORATION
Elyria, Ohio

Now including the famous SERVICE CASTER & TRUCK CORP. line of heavy duty materials-handling products

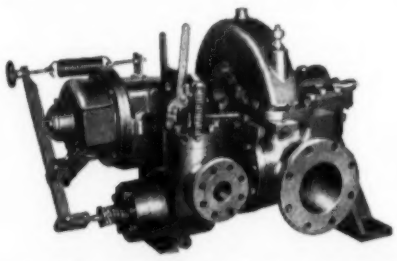
For more details circle **NED-378 H4** on enclosed inquiry slip

DE LAVAL
can help cut power costs

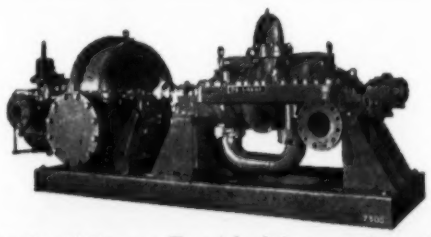
You can make important operating economies in your power house with dependable, efficient De Laval equipment. That's because De Laval turbine generators, mechanical drive turbines, boiler feed pumps and centrifugal pumps are designed for long, low-cost service. If you plan to modernize or expand your present facilities, consult a De Laval field representative or ask for the De Laval catalogs or bulletins listed below.



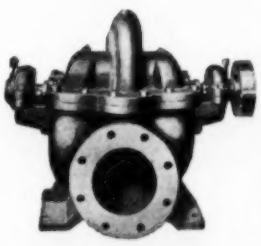
Turbine Generators Up to 11,500 kw. Available in automatic extraction designs. *Send for De Laval Catalog 4200A.*



Mechanical Drive Turbines For induced and forced draft fan drives, condensate and circulating and boiler feed pump drives. New De Laval HCB turbine available from stock. *Send for Bulletin 4206.*



Boiler Feed Pumps Furnished in a variety of designs and sizes to meet any boiler feed service. *Send for De Laval Bulletin 1502.*



Single Stage, Double Suction Centrifugal Pumps for condenser circulating and general services are available in capacities from 50 to 75,000 gpm. *Send for De Laval Bulletin 1002.*

DL-888

DE LAVAL STEAM TURBINE COMPANY
808 Nottingham Way, Trenton 2, New Jersey

For more details circle **NED-379 H4** on enclosed inquiry slip

Add Years to Air Equipment Life— Use Filtered Air

All air lines collect moisture. Rust and dirt enter the lines, too, to clog lines, and shorten equipment life.

Give your air equipment top protection with Schrader Air Line Filters ahead of each air control unit. Schrader filters offer no restriction to full air flow, even after long use. Moisture is trapped in the bottom of the filter, can be drawn off through a drain cock.

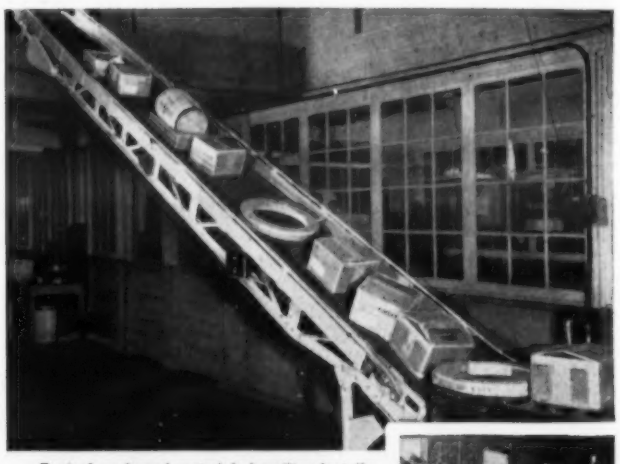
See how Schrader Air Line Filters and other Schrader accessories can add to your effective use of air. Send for the Schrader catalog today.

A. SCHRADER'S SON

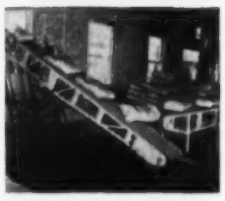
Division of Scovill Manufacturing Company, Incorporated

459 Vanderbilt Avenue, Dept. E-48 Brooklyn 38, N. Y.

For more details circle NED-380 H4 on enclosed inquiry slip



Typical packaged-materials-handling installation. Farquhar Conveyors stack, pile, store or move packaged materials from floor to floor faster and easier . . . make costly elevators unnecessary . . . cut your materials-handling costs to the bone.



Cement, fertilizer, feeds, lime, and many other bagged materials move rapidly and continuously on Farquhar Conveyors the world over.

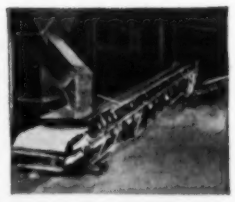
You Name It... We'll Move It!

Specify Farquhar for *your* Conveyor Problems!

SURE, there are probably some things that Farquhar Conveyors can't handle—like elephants, or battleships. But by and large, no matter what your conveying problem, Farquhar Conveyors can solve it. AND solve it at the *lowest* possible initial cost, *greatest* possible efficiency, and *smallest* possible unkeep!

Big claims? Sure! But Farquhar can back them up! Case histories in our files prove that Farquhar Conveyors are designed better, stand up better in use, and deliver greater efficiency and versatility. If you'd like to read about some of these success stories, mail the coupon below for your free copy of "Owners Report."

Your particular problem may be similar or slightly or radically different from those in this booklet. Regardless, the same Farquhar experience, know-how and engineering skill that solved problems for people like you all over the world . . . can solve *yours!* A note on your letterhead will bring a Farquhar sales-engineer on the run—at no obligation, of course!



Bulk materials — chemicals, sand, stone, etc.—present no problem when they're handled by Farquhar Conveyors.

A complete line of Farquhar Roll-Free roller and wheel conveyors let gravity do the work for you!

FREE! "Owners Report"—a booklet of case histories of money-saving conveyor installations.

OLIVER Farquhar CONVEYORS

POWER-BELT AND GRAVITY CONVEYORS

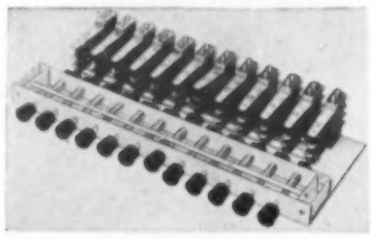
THE OLIVER CORPORATION
A. B. Farquhar Division
Conveyor Dept. G-04, York, Pa.

Gentlemen:
Please send me my free copy of "Owners Report."

Name ----------
Firm ----------
Address ----------
City ---------- Zone ------ State ----------

For more details circle NED-381 H4 on enclosed inquiry slip

PUSHBUTTON SWITCHES
redesigned units resist more shock



Redesigned line of pushbutton circuit switches feature improved shock resistance, longer life, easier assembly and operation. Improvements have been achieved by using fewer, stronger plungers; latch bars with added springing; easier operating contact lifters; and extruded and punched channel sections. The new model MPB switch consists of extruded frame on which are mounted pushbutton units of from 2 to 12 positions. Units can be supplied in accumulative lock, no two interlock, lock release and nonlock types. Made by **General Control Co.**, 1211 Soldiers Field Rd., Boston 34, Mass.

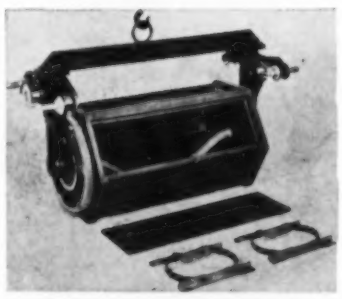
For more details circle NED-382 H4 on enclosed inquiry slip

FOUNDRY PATTERN LETTERS
provide clean draw from mold

"Cantonian" style pattern letters for foundry use have rounded corners to permit smooth, clean draw from the sand and to prevent breaking the mold. To further facilitate easy molding, open-type letters are used to eliminate formation of sand pockets as in the small triangle of the letter A. Draft and thickness specifications are the same as Sharp Face Gothic. Sizes presently available are ¼, ⅜, ½, ¾ and 1-in., with new sizes to be added upon demand. Made by **Canton Products**, P. O. Box 981-N, Canton 1, O.

For more details circle NED-383 H4 on enclosed inquiry slip

PLATING BARREL
cylinder withstands high temperature



Cylinder of this plating barrel is made of Tempron hard rubber which reportedly withstands high temperatures, even under load. Resistance to abrasion and strong acid is also very high. System of interlocking panels and ribs not only lends strength to construction, but facilitates individual replacement of component parts whenever necessary. Also offered is Teflon liner or membrane with very small perforations which can be installed in new cylinder with minor modifications. Made by **Udylite Corp.**, Dept. NED, 1651 E. Grand Blvd., Detroit 11, Mich.

For more details circle NED-384 H4 on enclosed inquiry slip

STOP RUST with ONE HAND

Yes, it's as easy as that! Just press the button on the top of the Rust Veto Spray can and metal parts are protected against rust with a clear, durable coating that seals out moisture.

Ideal for protection of parts in storage or between operations; also for tools, dies, jigs and fixtures in tool room. Leaves dry, waxy film that does not have to be removed before further use or processing.

Order a supply today and veto rust with Rust Veto Spray. Attach coupon to your purchase order.

Sold by case only.

E. F. HOUGHTON & CO.
303 W. Lehigh Ave., Phila. 33, Pa.

Please send _____ cases of Rust Veto Spray (1 doz. 12-oz. cans per case) at $15.24 per case f.o.b., Lancaster, Pa.

Name _____
Company _____
Address _____
City _____ Zone _____ State _____

N8-54

For more details circle NED-385 H4 on enclosed inquiry slip

NOW! HARDNESS-DIFFERENTIAL

built into seats of new UNION #603

No other Union has this differential!

In the new Rockwood Union #603, special heat treating of the male seat gives it a greater degree of hardness than the female seat. Result: *no galling in "making up" — longer service.*

Corrosion-resistant AIST molychrome steel seats are forged in place — double-locked under 100,000 and 400,000-pound pressure.

Other features: exclusive Rockwood cold forging process results in resistance to tough working conditions, permits absolutely interchangeable parts. Exclusive "Rockwoodizing" protects corrosion. For further details, write Rockwood Sprinkler Company, 508 Harlow Street, Worcester 5, Mass.

ROCKWOOD SPRINKLER COMPANY

For more details circle NED-386 H4 on enclosed inquiry slip

Alemite Loader Pumps refill hand guns in seconds!

Write for free catalog TODAY!

save 3¾ man hours for every 100 pounds of lubricant!

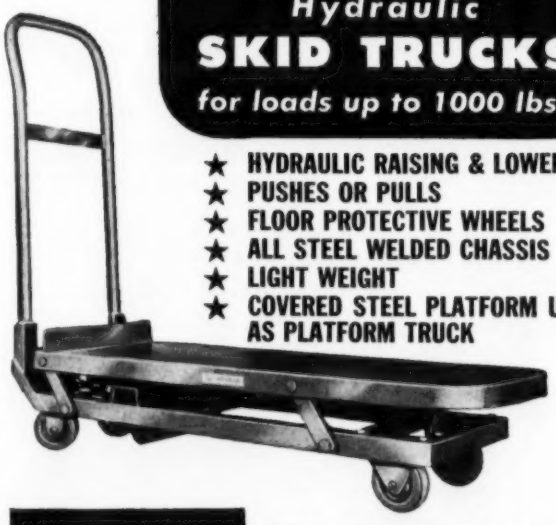
Now—grease guns are loaded quickly, efficiently. Say "goodbye" to wasteful, messy time-consuming hand and paddle loading. Alemite Loader Pumps fill guns fast! Lubricant is protected at all times from "barrel to bearing"—free of grit, dirt, abrasives. No more air pockets, gun is filled all the way. **Models available to handle all lubricants, in sizes to fit 25 pound pails to 400 pound drums.**

ALEMITE

Dept. NED-84, 1850 Diversey Parkway, Chicago 14, Ill.

For more details circle NED-387 H4 on enclosed inquiry slip

LOW COST, RUGGED Hydraulic SKID TRUCKS for loads up to 1000 lbs!



- ★ HYDRAULIC RAISING & LOWERING
- ★ PUSHES OR PULLS
- ★ FLOOR PROTECTIVE WHEELS
- ★ ALL STEEL WELDED CHASSIS
- ★ LIGHT WEIGHT
- ★ COVERED STEEL PLATFORM USED AS PLATFORM TRUCK

● Fully illustrated bulletin HST-19 describes this versatile truck in detail. Write for it today. Catalog GP-17 describing many standard Ironbound cost-saving units will be sent you without obligation, too.

IRONBOUND BOX & LUMBER COMPANY
55 Hoffman Place, Hillside, New Jersey

Ironbound — **IRONBOUND**

MANUFACTURERS OF QUALITY BUILT SKIDS, SEMI-LIVE SKIDS, FLOOR TRUCKS, SKID TRUCKS, ROLL TRUCKS, DOLLIES AND PRY BARS

For more details circle NED-388 H4 on enclosed inquiry slip

AJUSTRITE®

CHAIRS AND STOOLS

SAVE TIME AND MONEY

3 WAYS

1. Avoids confusion and lost time at start of each period, enables each worker to adjust seat height to fit own requirements.
2. Saves time of supervisors, foremen and maintenance men. Relieved of locating and adjusting seats for each employee.
3. Sturdy construction and special features eliminates maintenance costs—save as much as $3.00 per unit per year.

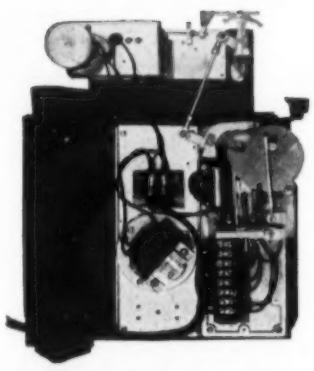
Sizes and models to meet any requirement. No tools needed—just lift seat to desired height—holds securely where upward lift stops. 2-way backrest adjustment gives support to stop fatigue. Reduces absenteeism.

FREE TRIAL
Try an Ajustrite for 30 days without obligation. The quick, easy, adjustment will surprise you

AJUSTO EQUIPMENT CO. • 2144 Madison Ave. • Toledo 2, Ohio

▲ For more details circle **NED-389 H4** on enclosed inquiry slip ▲

a new electronic flow meter!



- electronic operation provides high speed and greater accuracy
- continuous integration —no creep at zero
- unaffected by normal voltage, frequency and temperature changes
- 3 to 1 range calibration at recorder

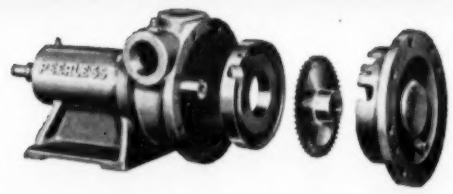
HAYS Electronic Flow Meter

Since the circuit is of the electronic null-balance type, it is unaffected by normal voltage and frequency variations. Also, neither temperature variations nor reasonable length of transmission lines affect the calibration of the instrument.

The *pen-drive motor* is built for reversing duty. Normal variations in voltage and frequency have no noticeable effect on its operation. The *integrator* is continuous in operation and simple in mechanical construction. A micrometer zero adjustment for calibration is easily accessible. *Indicators* can be calibrated to read directly in rate-of-flow or other factors as desired. *Write today for Bulletin 52-1074-222.*

THE hays CORPORATION
Michigan City 15, Indiana

▲ For more details circle **NED-390 H4** on enclosed inquiry slip ▲



EXPLODED VIEW shows easy accessibility to one moving part—the free-running impeller

Request Bulletin No. B-2205 for complete description and pump selection charts

VANE TYPE TURBINE PUMPS

FOR BOILER FEED & LP GAS TRANSFER

Face-Mount and Flexible-Coupled Types

For pumping hot and cold, clear and vaporous liquids. Standard and self-priming models for pumping capacities up to 58 gpm and against heads up to 800 ft. Used for liquid circulating, transfer and boosting, boiler feed and condensate return service. Easy and economical to apply, operate & maintain.

PEERLESS PUMP DIVISION
FOOD MACHINERY AND CHEMICAL CORPORATION
301 West Avenue 26
Los Angeles 31, California

PEERLESS PUMPS

New York; Indianapolis; Chicago; St. Louis; Atlanta; Dallas, Plainview and Lubbock, Texas; Los Angeles, Fresno, Calif.; Phoenix; Albuquerque, New Mexico.

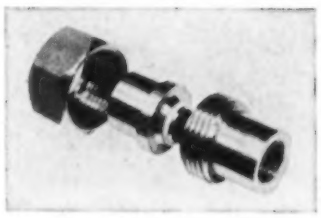
▲ For more details circle **NED-391 H4** on enclosed inquiry slip ▲

HOIST GRAB
for handling cylindrical forms

Designed for transferring large cylindrical forms to and from machines, style 1145 hoist grab carries loads horizontally to reduce floor-to-floor time and facilitate pick-up. Lever-action device grips as load is applied, automatically releases when load is set down. It is easily operated by one man and is adjustable for load diameter. Made by **Mansaver Industries, Inc.,** 3105 East St., New Haven 3, Conn.

▲ For more details circle **NED-392 H4** on enclosed inquiry slip ▲

STAINLESS PIPE FITTINGS
for high pressure and vacuum uses



Such metals as stainless steel, Monel and nickel are available in line of corrosion resistant screw thread pipe fittings for pipe from ¼ through ¾-in. Elbows, tees, unions and connectors feature a double-sealing action which makes fittings suitable for high pressure and vacuum applications. Each has a Teflon sealing ring to guard against fluid or gas loss, in addition to its metal-to-metal seal. Tests have shown fittings withstand 20,000 psi hydrostatic tests and 500 psi pneumatic pressure. Made by **Special Screw Products Co.,** Dept. 23, 5445 Dunham Rd., Bedford, O.

▲ For more details circle **NED-393 H4** on enclosed inquiry slip ▲

TORQUE SCREW DRIVER
range is from 0 to 6 lb-in.

Production model SD6 Trutorq screw driver can be preset at any desired torque between 0 to 6 lb-in. Accuracy is within 8 oz-in. This feature prevents marring of screw slots or working surfaces and prevents threads from stripping. Built-in friction clutch slips when desired torque is reached. Illustrated model has aluminum handle, is 3¾-in. long and weighs 5 oz. It is designed to accommodate standard screw driver blades, hex bits, Phillips bits, ¼-in. square drives or special blades. Made by **Airdraulics Engineering Sales Co.,** Driver Dept., Allendale, N. J.

▲ For more details circle **NED-394 H4** on enclosed inquiry slip ▲

SAFETY EQUIPMENT FOR ALL INDUSTRIES

AVOID LADDER SLIPPING ACCIDENTS

•

UNIVERSAL LADDER SHOES

Meets the requirements for use on all types of floors and surfaces. Provides real ladder security. Approved by the Underwriter's Laboratories. Adopted by many companies for general service.

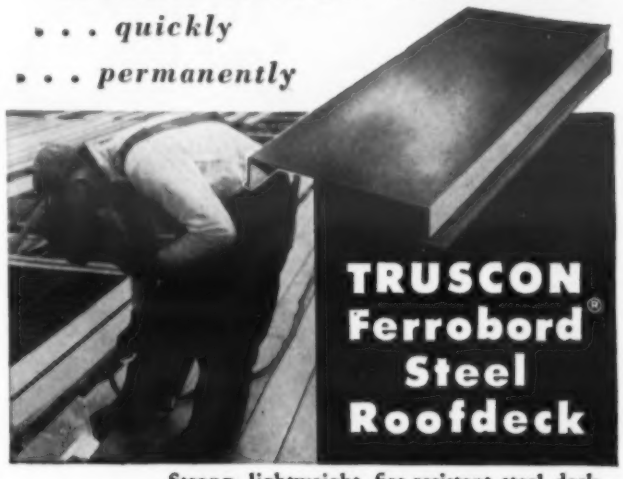
WRITE FOR BULLETIN NO. 9

IPCO *Safety Equipment for all Industries*
INDUSTRIAL PRODUCTS COMPANY
2807 N. FOURTH STREET • PHILADELPHIA 33, PA.

▲ For more details circle **NED-395 H4** on enclosed inquiry slip ▲

ROOF LARGE AREAS

. . . quickly
. . . permanently



Strong, lightweight, fire-resistant steel deck for flat, pitched, or curved roofs. In units long enough to span three or more purlin spacings. Each member firmly interlocks along its full length with adjoining unit for maximum strength. Erected from above, no scaffolding needed. Ideal surface for application of insulation and built-up waterproofing. 18-gage and 20-gage copper-bearing steel, 6" wide, 1½" or 1¾" deep. Free book has details, sizes, specifications. Write:

TRUSCON®
a name you can build on

TRUSCON STEEL DIVISION
REPUBLIC STEEL
1096 ALBERT ST. • YOUNGSTOWN 1, OHIO
Export Dept: Chrysler Bldg., New York 17, N.Y.

▲ For more details circle **NED-396 H4** on enclosed inquiry slip ▲

Fast DIRECT-CAST

Investments...with new Detroit Furnace

Type IC Furnace with mold attached.

This new direct-casting Detroit Electric Furnace produces better precision castings in less time. Fast, indirect arc melting plus direct furnace-to-mold casting cuts production cycle to as little as 7 minutes.

Uniform melts bring lowest reject rate, increases over-all efficiency. Low power consumption, high utilization of heat for operating economy. Get full information on Type IC Detroit Electric Furnace for higher precision casting production. Write today!

DETROIT ELECTRIC FURNACE DIVISION
KUHLMAN ELECTRIC COMPANY
1060 26th St. • BAY CITY, MICHIGAN

Foreign Representatives: in BRAZIL—Equipamentos Industrias, "Elsa" Ltd., Sao Paulo; CHILE, ARGENTINA, PERU and VENEZUELA: M. Castellvi Inc., 150 Broadway, New York 7, N. Y.; MEXICO: Cia Proveedora de Industrias, Atenas 32-13, Apartado 27A3, Mexico 6, D. F., Mexico; EUROPE, ENGLAND: Birlec, Ltd., Birmingham.

▲ For more details circle **NED-397 H4** on enclosed inquiry slip ▲

with a LINK-BELT Car Spotter

ONE man . . . two or three turns of rope around the motor-driven capstan . . . and up to six loaded cars are spotted accurately in seconds. Pays for itself in reduced switching and demurrage charges. Can also be used for quick, easy moving of heavy vehicles, skids, barges, etc.

Get the complete story. WRITE TODAY!

LINK-BELT COMPANY 13,615
307 N. Michigan Ave.,
Chicago 1, Ill.

Please send me 24-page illustrated Book 2092.

Name .....
Firm .....
Address .....
City ..... Zone .... State .....

▲ For more details circle **NED-398 H4** on enclosed inquiry slip ▲

Conversion from Copper to ALCUPLATE® can Reduce Your Cost up to 30%

What is ALCUPLATE?
ALCUPLATE is a solid layer of copper permanently clad on one side or both sides of less expensive aluminum.
This gives you solid copper performance at a lower cost over solid copper.
In addition to its lower cost, ALCUPLATE has virtually the same physical and electrical properties as pure copper.
This permits fabrication of many parts and products from ALCUPLATE at savings of from 15%-30% over solid copper.

Can ALCUPLATE be worked?
ALCUPLATE can be fabricated by stamping, drawing, spinning and forming. The copper provides an ideal surface for soft-soldering operations and electroplated or other finishes.

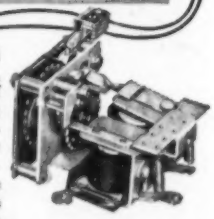
In what sizes is ALCUPLATE stock available?
In coils or flat stock up to 1/16" thick x 13" wide and in a choice of thickness ratios and tempers.

ALCUPLATE FEATURES:
- Natural copper appearance
- High electrical conductivity
- Excellent heat dissipation
- Soft-soldering surfaces
- Easy fabrication
- Light weight

ALCUPLATE®

For further information, write or wire
METALS & CONTROLS CORPORATION
GENERAL PLATE DIVISION
88 FOREST STREET, ATTLEBORO, MASS.

▲ For more details circle **NED-399 H4** on enclosed inquiry slip ▲



SERIES M.E.R. Guardian Midget Electrical Reset Stepper keeps the reset magnet open, allows the ratchet to reset freely on a pulse of 10 milli-seconds. Stepping magnet releases lock mechanism on first step to ready unit for recycle. Standard unit has one disk with one finger rotating counter-clockwise. Two fingers available. Up to 21 of total 24 points on disk are active. Rated at 10 steps per second. Voltage ranges: 6 v. to 115 v. A.C., 60 cycles, or 6 v. to 110 v. D.C. Auxiliary small combination contact switches can be mounted on ratchet or on either magnet. New 3-point mounting for easy installation.

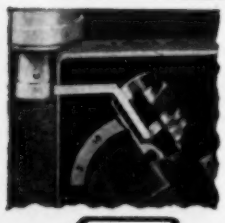
SERIES M.A.S. Stepper. A compact dependable Add and Subtract unit.
SERIES M-120 Stepper. Up to 3 position contact combinations.

Write **for catalogs featuring Guardian Steppers, Relays, Solenoids, Switches, Solenoid Contactors and Hermetically Sealed Controls.**

GUARDIAN ELECTRIC
1626-J W. WALNUT STREET CHICAGO 12, ILLINOIS
A COMPLETE LINE OF RELAYS SERVING AMERICAN INDUSTRY

▲ For more details circle **NED-400 H4** on enclosed inquiry slip ▲

You can MEASURE the ROUGHNESS of practically ALL surfaces
(internal and external—flat, round, and tapered)
with the PROFILOMETER®
(quickly—dependably—in the shop—in microinches)
. . *thereby saving time and money in unexpected ways!*



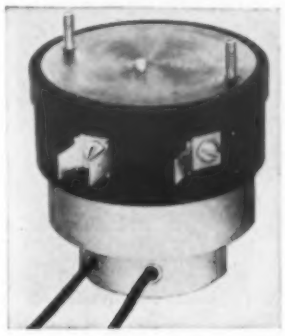
FREE BULLETIN LT89
gives details—shows production and quality control applications. Write for it!

Profilometer is a registered trade mark.

MICROMETRICAL MANUFACTURING COMPANY
345 S. MAIN ST. ANN ARBOR 9, MICH.

▲ For more details circle **NED-401 H4** on enclosed inquiry slip ▲

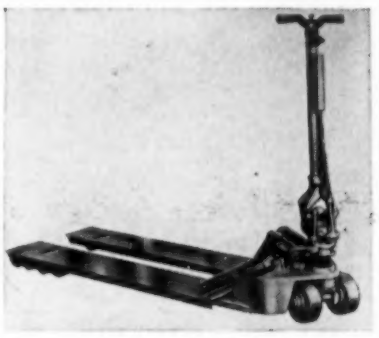
FIXED INTERVAL TIMER with 15-second to 1-month range



Compact dust-tight housing is featured by series PB fixed interval timer, suitable for operation in any position. Its Circle B synchronous motor is rated for 25 amp at 115 v 60 cycles ac. Button actuated timer switch turns on the load, then turns it off after elapse of the factory-set time interval. Unit is offered with a 15-second to 1-month interval range and features quick connect terminals, heavy duty solid silver contacts, nylon cam, latch and operating button. Size is 2¼ x 2⅛ in. Made by **Vocaline Co. of America,** Bristol Motor Div., 7 Coulter St., Old Saybrook, Conn.

▲ For more details circle **NED-402 H4** on enclosed inquiry slip ▲

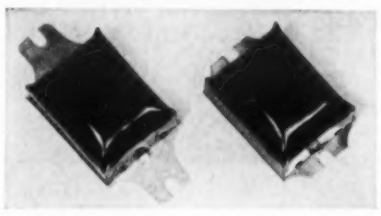
PALLET LIFT TRUCK is 2500-lb capacity unit



Virtually any size or type of pallet, single or double-faced, can be handled by the Pal Boy 2500 - lb capacity pallet lift truck designed for industrial and warehouse use. All - welded unit is available in 24 and 27-in. widths and fork lengths of 36, 40, 42 and 48 in. Wheels are ball bearing equipped. Extra ball bearing booster rollers provide easy entry into double-faced pallets. Full 270-degree lifting handle permits lifting from most any angle. Handle revolves full 360 degrees for easy handling in narrow aisles. Safety spring prevents handle from dropping. Made by **West Bend Equipment Corp.,** 421 Water St., West Bend, Wis.

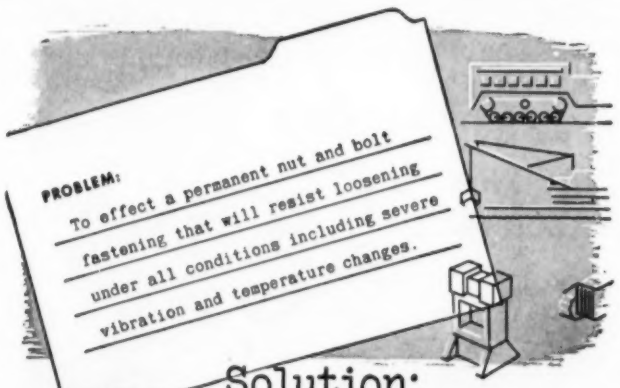
▲ For more details circle **NED-403 H4** on enclosed inquiry slip ▲

FLUORESCENT BALLAST small unit is UL-approved

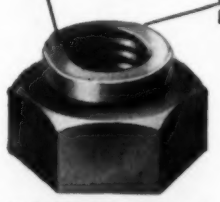


Measuring only 2¼ x 1⅞ x 1 5/16 in., this enclosed fluorescent light ballast is designed for 4 to 20-w lamps. The UL-approved unit is available in standard 3¾ and alternate 2⅝-in. mounting center sizes. Made by **Stratfield Co.,** 434-A Grand St., Bridgeport, Conn.

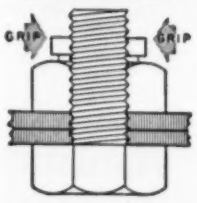
▲ For more details circle **NED-404 H4** on enclosed inquiry slip ▲



Solution: *Lamson* **LOCK NUTS**



U. S. PAT. NO. 2255286



Unlike many other lock nuts, the Lamson Lock Nut is a *one-piece all steel* nut that does not depend upon inserts or special methods of application for use.

As it is turned on the bolt, the heat-treated crown collar, slightly distorted from the round, grips the bolt firmly. When the nut is tightened the threads of the collar are forced against the "non-pressure flanks" of the bolt. Since the main body of the nut is exerting pressure on the "pressure flanks" a radial locking action results. Lamson Lock Nuts may be reused repeatedly without losing their locking action.

So, if you have a problem as stated above, consider Lamson Lock Nuts. They are the ideal solution from every standpoint.

The LAMSON & SESSIONS Co.
1971 West 85th St. • Cleveland 2, Ohio
CLEVELAND AND KENT, OHIO • BIRMINGHAM • CHICAGO

▲ For more details circle **NED-405 H4** on enclosed inquiry slip ▲

Wheeler LIGHTING FIXTURES

A BASIC PRODUCTION TOOL OF AMERICA'S LEADING INDUSTRIES

In industry after industry . . . where modern progressive thinking rules . . . Wheeler Lighting Fixtures are the logical choice for maximum lighting efficiency!

WHEELER REFLECTOR COMPANY
275 CONGRESS STREET, BOSTON 10, MASS.
DISTRIBUTED EXCLUSIVELY THROUGH ELECTRICAL WHOLESALERS

▲ For more details circle **NED-406 H4** on enclosed inquiry slip ▲

***Now!* Greater than Ever FACILITIES**
TO MEET YOUR ASSEMBLING REQUIREMENTS!

POWER SCREWDRIVERS

POWER SCREWDRIVER

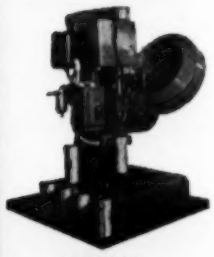
SELECTIVE PARTS FEEDERS

BARREL FEEDER

SPECIAL ASSEMBLING MACHINES

BOWL FEEDER

EXTENDED ENGINEERING SERVICE



SPECIAL ASSEMBLING MACHINE

● *Action . . . More Action . . .* in your assembly department! *More Speed . . . Greater Accuracy . . . Lower Costs . . .* Vital factors in your production program . . . Advantages available to you through the DPS expanded line and increased manufacturing facilities . . . Tell us your story . . . *Let our trained engineers analyze your problem . . .* Whatever your feeding and assembling operations may be, they will come up with a practical solution.

GIVE US THE DETAILS... SEND SAMPLE ASSEMBLY.

DETROIT POWER SCREWDRIVER CO.
2819 W. FORT ST. DETROIT 16, MICHIGAN

▲ For more details circle **NED-407 H4** on enclosed inquiry slip ▲

If you have a labeling problem ordinary labels can't solve...use

AVERY Kum-Kleen self-adhesive LABELS

...the tough ones are our specialty

...where other types of labels are found "wanting"...or when you need to substitute an attractive pressure-sensitive label for a costly nameplate... Avery Kum-Kleen labels are the *best* solution to your problem!

...and so are the other kind..

...where you want *faster* labeling... improved appearance...labels that won't pop, curl or peel...or those the housewife can remove without soaking or scraping...there's no substitute for an Avery Kum-Kleen label!

faster • easier • more economical

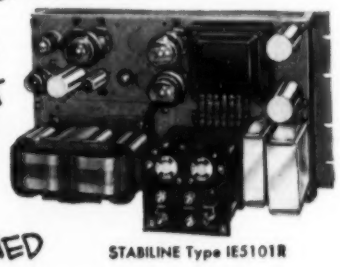
Patented Avery dispensers...manual or electric... feed die-cut *pressure-sensitive* labels off roller tape, ready to be LAID ON any clean, smooth surface. No moistening...no sticky fingers.
Where can YOU use these labels in YOUR business? Write today for free samples, case histories and prices.

AVERY ADHESIVE LABEL CORP., DIV. 102
117 Liberty Street, New York 6 • 608 South Dearborn Street, Chicago 5
1616 So. California Ave., Monrovia, Cal. • Offices in Other Principal Cities
Originators of Pressure-Sensitive Labels

For more details circle NED-408 H4 on enclosed inquiry slip

Mr Designer:

WHEN YOU USE ELECTRICAL COMPONENTS IN A DESIGN, AVOID TROUBLE A STABILINE INSTANTANEOUS ELECTRONIC AUTOMATIC VOLTAGE REGULATOR KEEPS ELECTRIC EQUIPMENT ACCURATE AND ACTING AS DESIGNED



STABILINE Type IE5101R

Protect yourself and the performance of that fine machine or piece of equipment you are designing. Voltage variation — perhaps even so-called "normal" variation — may throw it out of "kilter". The equipment gets into trouble . . . so does your sales manager . . . so do you.

Effective automatic voltage regulation prevents varying voltage trouble. And you'll find the STABILINE Type IE the finest of its kind. Available in ratings from 0.25 to 5.0 KVA. Write for details.

STABILINES TYPE IE FEATURE:
1. For all conditions maximum voltage variation less than 0.25 of 1%.
2. For voltage input changes variation less than 0.1 of 1%.
3. Correction speed — 3 to 10 cycles.
4. Waveform distortion never over 3%. Usually under 2%.
5. Models for 50 and 60 cycle operation in 115 and 230 volt ratings. 0.25 to 5.0 KVA capacity.

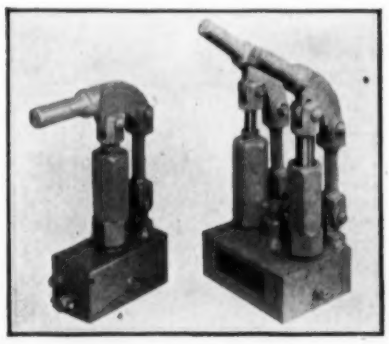
Be sure to see the Superior Electric Mobile Display when it is in your area.

The SUPERIOR ELECTRIC Company
1808 CLARKE AVE., BRISTOL, CONN.

For more details circle NED-409 H4 on enclosed inquiry slip

HAND HYDRAULIC PUMP

Single and Double Designs to 20,000 Psi
With or without Reservoir



Standard Reservoirs 70- 160- 910 Cu. In. Capacity

Interchangeable Pistons ⅜-½-¾ Inch

1-inch Piston (Special)

Pipe connections ¼" N.P.T.

Handle length is 18 inches.

Unit can be bolted or welded into position.

"We specialize in hand pump units to operate in temperatures from minus 65 F to plus 160 F and with any capacity reservoirs required."

The single pump with ½" or ¾" piston now available in stainless steel.

WILLIAM S. PINE
1635 E. 22nd St., Los Angeles 11, Calif.

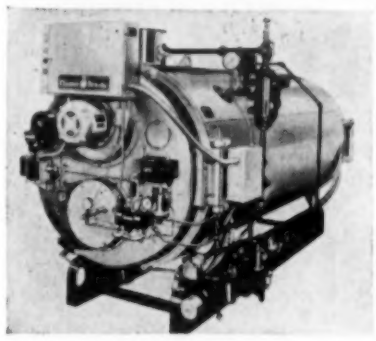
For more details circle NED-410 H4 on enclosed inquiry slip

INDUSTRIAL TRUCK FORKS adjust side to side hydraulically

Attachment for Towmotor industrial trucks is designed to provide dual fork and clamping functions. Forks adjust hydraulically from side to side to speed handling when a variety of different width of pallet loads is encountered. Installion is by bolting directly onto support plates of standard clamp operating mechanism. Rapid removal for use of other clamps or standard forks is possible. Made by **Towmotor Corp.**, 1219 E. 152nd St., Cleveland 10, O.

For more details circle NED-411 H4 on enclosed inquiry slip

PACKAGED BOILERS 50, 60, 70 and 80-hp models



Line of CB packaged boilers has been expanded to include 50, 60, 70 and 80-hp models. Units will burn gas or light or heavy oils and can be converted from one fuel to another in less than a minute. Silent operation adapts units for use where sound level is critical. Built-in oil preheating equipment is fitted, as are electric combustion safety controls. Hinged front and rear doors provide accessibility for operation and maintenance. Four-pass construction assures minimum efficiencies of 80 per cent with oil firing. Made by **Cleaver-Brooks Co.**, Dept. NED, 326 E. Keefe Ave., Milwaukee 12, Wis.

For more details circle NED-412 H4 on enclosed inquiry slip

ELECTRODE HOLDER features molded glass fiber handle

Molded glass fiber construction of 14-oz 300-amp Caddy Cub electrode holder provides high tensile strength, resistance to moisture and arc radiation and resistance to mechanical abuse. Handle has molded longitudinal grooves which give firm grip. Model B-20 will operate continuously using 1/16 to 3/16-in. electrodes and intermittently using ¼-in. electrodes. Made by **Erico Products, Inc.**, 2072 E. 61st Pl., Cleveland 3, O.

For more details circle NED-413 H4 on enclosed inquiry slip

SPEED CONTROL WIDE RANGE! LOW COST!

new catalog free

Just off the press! New illustrated catalog describes SPEED SELECTOR'S new line of Variable Pitch Sheaves. These sheaves are for extra-wide range of speed control on fixed centers...also completely new designs for low speed applications. Save time, trouble, money...WRITE FOR CATALOG No. 44 TODAY.

SPEED SELECTOR INC.
118-N NOBLE COURT • CLEVELAND 13, OHIO

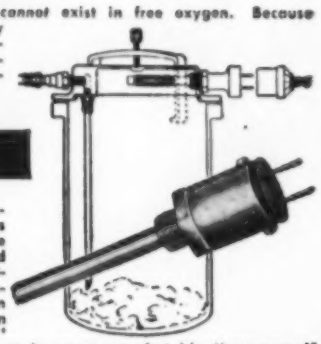
For more details circle NED-414 H4 on enclosed inquiry slip

The Case of the **SNUG BUGS**

Solved by **WATLOW** ELECTRIC HEAT

The Case:

Certain bacteria (the anaerobes) cannot exist in free oxygen. Because they are useful in research, they are cultivated in a Brewer Anaerobic Jar which makes use of hydrogen or illuminating gas to eliminate free oxygen.



The Solution:

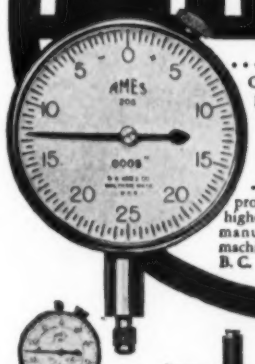
Watlow designed a special cartridge unit sealed in a ⅜" brass tube with a pipe thread and male plug, operating at 115v, 25w, and measuring 5" overall. When heated, it activates a platinized catalyst which causes the hydrogen to combine with the free oxygen to form hot water. The "bugs" are then free to live and reproduce in warm, comfortable "no-oxygen" surroundings.

Watlow solves unusual electric heating problems every day. What is your heating problem?

WATLOW ELECTRIC MFG. CO.
Since 1922—Designers and Manufacturers of Electric Heating Units
1374 FERGUSON AVE.
SAINT LOUIS 14, MO.

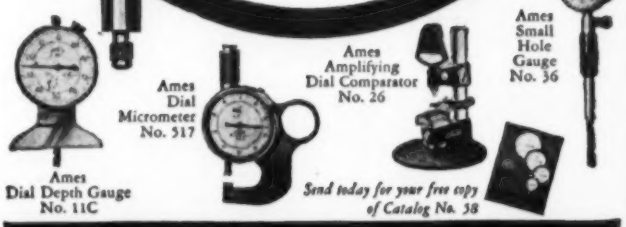
For more details circle NED-415 H4 on enclosed inquiry slip

AMES



...the preferred Dial Indicators

One of America's largest and most famous mass-producers recently chose Ames as preferred source of supply for indicator gauges. They did because the four sizes of Ames "Hundred Series" indicators fit every measuring requirement; they are *accurate, sensitive,* low in friction, yet are *rugged* and *tough*—give *more* on-the-job time. All Ames products embody latest design and highest-quality materials; they are manufactured by methods and machines that are *exclusive* with B. C. Ames Co.



Send today for your free copy of Catalog No. 58

Representatives in principal cities B. C. AMES CO. *34 Ames Street, Waltham 54, Mass.*
Mfgr. of Micrometer Dial Gauges • Micrometer Dial Indicators

For more details circle NED-416 H4 on enclosed inquiry slip

HOW TO SPEED Drum Handling and Save Money

Exclusive! American Drum and Barrel Cradles are designed for one-man handling.
Exclusive! American's disappearing patented loading bar adds speed and safety.
Exclusive! American's Semi-knocked-down packaged units save shipping costs and warehouse space.

Clip coupon and mail today.

THE AMERICAN PULLEY COMPANY
4294 Wissahickon Ave, Phila. 29, Pa.

Complete line of Pressed-Steel Hand Trucks • Steelite® Industrial Wheels • Drum King Hand Truck

Gentlemen:
Please send me more information on American Drum and Barrel Cradles.
Name _____
Firm Name _____
Address _____
City _____ Zone _____ State _____

For more details circle NFD-417 H4 on enclosed inquiry slip

Cut Maintenance Costs with CARBOLOY MASONRY DRILLS

Anchoring machinery

Stringing electrical conduits

Installing plumbing

Get fast, clean, deep holes, at any angle, in concrete, asphalt, tile, brick, slate, marble, etc.

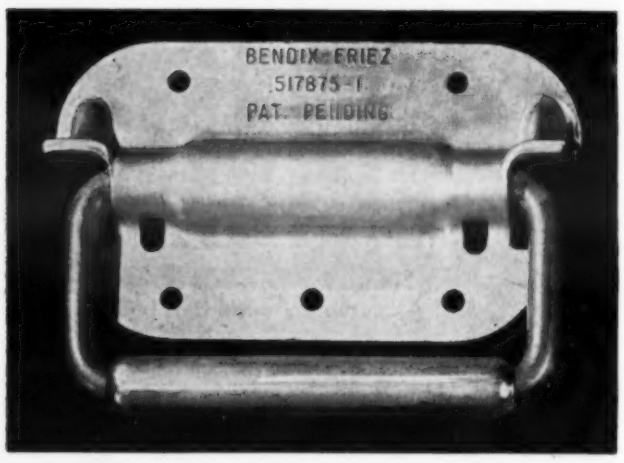
Carboloy Masonry Drills won't pack or stall. Rotary-drill *any* masonry continuously to any depth. Superhard Carboloy cemented carbide cutting tips assure long drill life. Available separately, or in job-designed kits. Sizes 3/16" through 1½".

For complete information contact your distributor or write—

CARBOLOY
DEPARTMENT OF GENERAL ELECTRIC COMPANY
11179 E. 8 Mile Street, Detroit 32, Michigan

"Carboloy" is the registered trademark for products of Carboloy Department of General Electric Company.

For more details circle NED-418 H4 on enclosed inquiry slip



WONDERFUL NEW HANDLE

. . . If you sell or ship anything that has to be lifted, this is for you. It meets military requirements for many specialized equipment uses. Count its advantages in the specs below.

This patented Bendix-Friez handle is rust-proof . . rattle-proof and withstands shock and vibration.

It has a positive "snap-back" principle.

Built of stainless steel and aluminum, it can be riveted or welded to any kind of container or depressed in the sides.

What's a large instrument manufacturer doing making handles? We couldn't seem to find one for our own use that pleased us . . . so we made one ourselves.

Manufacturers who saw it and needed a better handle liked it. If you've got something that's got to be lifted by handles . . . chances are this Bendix-Friez handle is for you. Small or large quantity orders. Inquiries answered promptly.

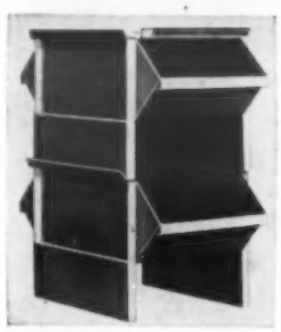
BENDIX FRIEZ

FRIEZ INSTRUMENT
Division of
Bendix
AVIATION CORPORATION
1444 Taylor Ave., Balto. 4, Md.

EXPORT SALES
Bendix International Division
205 E.42nd St., New York 17, N.Y.U.S.A.

For more details circle NED-419 H4 on enclosed inquiry slip

SCOW-TYPE PALLETS can be stacked six high



Scow-type materials handling pallets are designed for handling small or large parts during processing operations. Deck is 12 in. from the floor, making contents readily accessible to machine operators. Pallets are also suitable for storage purposes. They are fitted with built-in guides and stops, can be stacked six high and are easily handled by lift trucks. Contents of stacked pallets are readily accessible. Pallets are 47 x 30 x 29 in. and weigh 236 lb. Made by **Galion Allsteel Body Co.,** Dept. P, S. Market & Parsons Sts., Galion, O.

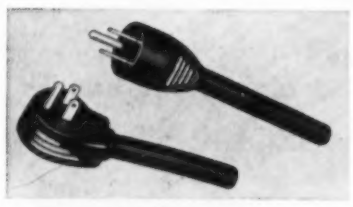
For more details circle NED-420 H4 on enclosed inquiry slip

CUTOFF TOOL BLADES of high speed steel in eight sizes

Line of high speed steel blades for use in cutting-off tools are available in range of eight sizes from 3/32 x ½ x 4½ in. to ¼ x 1⅜ x 7 in. Blades are ground on all four sides, with sides other than top and bottom being bevel ground. They are offered in two series, one for use in straight and right hand off-set tools, the other for use in left hand off-set tools. Made by **Armstrong Bros. Tool Co.,** Dept. R-42, 5245 W. Armstrong Ave., Chicago 30, Ill.

For more details circle NED-421 H4 on enclosed inquiry slip

THREE-CONDUCTOR CAPS straight and 90-degree angle types



Blades and grounding pins in line of molded rubber three-conductor male attachment caps are positioned according to National Electrical Code regulations effective in January 1955. Straight and right angle plugs feature parallel blades for 15-amp, 125-v operation and tandem blades for 15 amp, 250-v operation. All are UL-approved and available for wire gage sizes from 12-3S to 16-3SJ. Ground wire is secured to a contacting pin projecting from the plug end parallel to the blades. Made by **Essex Wire Corp.,** Cords Limited Div., Dept. CS, DeKalb, Ill.

For more details circle NED-422 H4 on enclosed inquiry slip

NEW MAINTENANCE EFFICIENCY with ERIEZ Magnetic "SWEEPERETTE"

10-DAY FREE TRIAL

Here is the self-contained magnetic cleaner, "Sweeperette"! It cleans tramp iron from plant floors, parking lots, warehouses, etc. with vacuum cleaner efficiency. No electric current. No wires. *Your first cost is the last cost.*

"Sweeperette" magnetic tube of powerful Alnico V, rolls with the wheels . . picks up nails, tacks, scrap iron on 360° of its surface up to a thickness of ¾"! Offset handle permits the unit to go under work benches, machinery, etc. The magnetic tube is easily removed from the frame and the tramp iron is quickly wiped off with neoprene wiper ring into collection pan which is part of the unit.

Tube then becomes a real MAGNETIC WAND! Can be used as a retriever magnet . . . as a small batch cleaner . . . as an underwater recover magnet! A dozen daily maintenance uses.

Buy "Sweeperette" direct from factory:

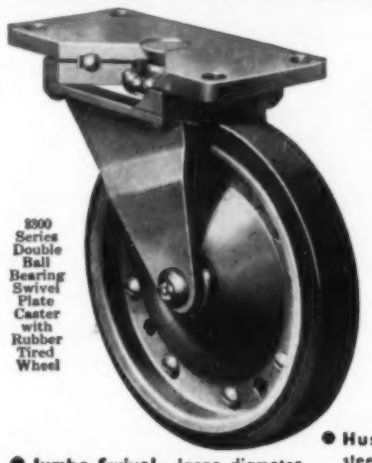
Model	Overall Width	Approx. Shpg. Weight	Price: F.O.B. Erie, Pa.
S-8	10 3/16"	5 lbs.	$34.50
S-12	14 3/16"	6 lbs.	40.50
S-16	18 3/16"	7 lbs.	47.50
S-20	22 3/16"	7½ lbs.	55.00
S-24	26 3/16"	8 lbs.	61.50
S-32	34 3/16"	9½ lbs.	70.00

Or write for brochure giving full information. Free 10-day trial. Satisfaction guaranteed or money back.

ERIEZ ERIEZ
MANUFACTURING COMPANY
80H Magnet Drive, Erie, Pa.

For more details circle NED-423 H4 on enclosed inquiry slip

Faultless ENGINEERED TRUCK CASTERS CUT HANDLING COSTS


3300 Series Double Ball Bearing Swivel Plate Caster with Rubber Tired Wheel

NEW! MAN-SAVER AND EXPEDITER for INDUSTRY

Here's the answer to your need for *extra* mobility . . . *extra* load capacity . . . *extra* output from less manpower. It's the ideal caster for quickly and quietly moving trucks or other mobile equipment and there's a clear profit from the *extra* mileage they give. Ask your supplier for Series 3300.

- **Jumbo Swivel**—large diameter ball races. Two full rows of balls rolling around hardened raceways formed in heavy steel plates.
- **Husky Horn**—heavy gauge steel sides and top plate riveted into single unit of surplus strength.
- **Oversize King-Pin**—machined to precision fit.

FAULTLESS CASTER CORPORATION
Dept.NE-8, Evansville 7, Indiana
Branches in Principal Cities—Canada Factory: Stratford, Ont.

For more details circle NED-424 H4 on enclosed inquiry slip

TRAC-LIFT

ALL-PURPOSE FORK LIFT TRUCK FOR LIFTING, CARRYING & TOWING

Model 40 handles up to 4000-lb loads and model 20 will lift and transport up to 2000-lb loads.

Service and parts for engines and chassis are available at International Harvester dealers throughout the United States

Machines feature high underclearance and good traction for use on rough terrain as well as on paved areas both indoors and out. Powered by International Harvester gasoline Tractor engines and Chassis of proven ability and long service, units have standard 96-in. lifting heights, with 72, 108 and 120 in. lifts optional. Both have power forward tilt of 4 degrees and backward tilt of 10 degrees. Power hydraulic lift and tilt system are engineered for easy maintenance and safety.

Optional equipment includes head and rear lights, 1/3-cu yd loading bucket, 6-ft snow and dozer blade, and 8-ft loading boom. *For complete information, write to:*

★ ★ ★ ★ ★ **PIPER & PAINE**
NUNDA, NEW YORK

For more details circle NED-425 H4 on enclosed inquiry slip

"George"* the MATERIALS HANDYMAN

. . . is a almost-automatic tote box truck that pays for itself in lift and strain prevention. Small metal parts, in several boxes, are easily drawn over beveled edge of truck and held in safe position by means of mechanical leverage handle hook. Load rests on set of *upper* rollers while *lower* traction rollers make easy hauling to destination. Most plants can use a battery of "George" trucks . . . for protective, low-cost, long service life. Women operate these trucks easily, without trouble or strain. Details on request.

LET "George" DO IT

*TRADEMARK

Write for free Folder N

2RG54B **ROLOCK Inc. • Fairfield, Conn.**

For more details circle NED-426 H4 on enclosed inquiry slip

JABSCO STAINLESS STEEL PUMPS SOLVE CORROSIVE PUMPING PROBLEMS

Designed and Engineered for Chemical Applications

Jabsco's complete line of self-priming, corrosion-resistant pumps answer a multitude of pumping needs. Models 2810 (1" pipe size), 2870 (½"), and 2690 (⅜") have all metallic parts of Type 316 stainless steel. Shafts are supported by oversize, replaceable carbon bearings, stuffingbox type shaft seal with chemical resistant packing. Pumps function perfectly even with dry suction lifts approaching 15', no foot valve is required. When primed, they suck as high as 26'. Jabsco pumps have no metal-to-metal contact, no gears to wear or become noisy. The exclusive "camflexed" Neoprene Impeller is the only moving part. This tough, long-lived, wear resistant impeller is self-lubricated by the liquid pumped. Jabscos are economical, low in first cost, and trouble and maintenance free, even under continuous operation. May be mounted at any angle to pump thin or viscous liquids, and can be operated efficiently at low or high speeds. At 10' head and 1750 RPM, Model 2810 delivers up to 27 GPM, Model 2870 up to 10 GPM, Model 2690 up to 4 GPM. Other stainless steel models also available with ball bearings and mechanical seals. For complete information on how Jabsco can solve your pumping problems, write **Jabsco Pump Company,** 2031 North Lincoln Street, Burbank, California.

ADVT.

▲ For more details circle **NED-427 H4** on enclosed inquiry slip ▲

Alligator Shear

Here is a low priced, fast operating "CANTON" Alligator Shear for processing light industrial scrap and for cutting metals. Cuts 2" square bars in mild steel or 3/8" x 24" in plates. Bronze bushed throughout with adjustable knife seat. Gasoline or electric power is optional.

CATALOG N-3 GIVES DETAILS

The HILL ACME CO.
"CANTON" DIVISION 1209 W. 65TH ST., CLEVELAND 2, OHIO

▲ For more details circle **NED-428 H4** on enclosed inquiry slip ▲

Brand Spanking New!

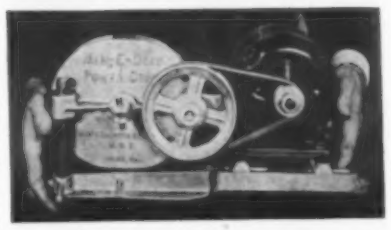
MEYCO CONTROLLED CUT CARBIDE TIPPED SAFETY SAW

★ The latest addition to the famous MEYCO line of precision cutting tools. This new controlled cut, carbide tipped safety saw has many advantages: It's SAFE: will not pull hand into the blade, will not grab and kick-back work. It's ECONOMICAL: costs less to buy, longer life between grinds; cuts smoother, longer. Its CONTROLLED CUT regulates rate of feed, assures clean cut; makes chips instead of saw dust. Available at leading mill supply and hardware houses, or direct from factory. Write for fully descriptive literature and price list. Ask for Catalog No. 19.

W. F. MEYERS CO., INC., BEDFORD, INDIANA

▲ For more details circle **NED-429 H4** on enclosed inquiry slip ▲

VARIABLE SPEED REDUCERS
two models cover 1-750-rpm speeds



Available in two sizes, Men-E-Uses speed reducers are suitable for use with from ¼ to 2-hp motors and for infinitely variable, speeds from 1 to 750 rpm. Model 1 provides speeds from 20 to 750 rpm. Model 2 produces speeds from 1 to 150 rpm. Made by **U. S. Expansion Bolt Co.,** New Standard Div., 620 State St., York, Pa.

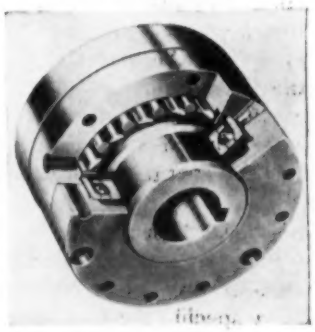
▲ For more details circle **NED-430 H4** on enclosed inquiry slip ▲

DC RECTIFIER BRAKE
for ac cranes and hoists

Specially designed for alternating current operated hoists and smaller capacity cranes, RCD direct current rectifier brake is of heavy-duty selenium rectifier design. Offered on P&H type R Hevi-Lift hoist and Trav-Lift crane, it provides direct action with very short stroke. Both setting and releasing are very fast to provide good control, and long lining wear is achieved. Welded construction is used throughout for strength and durability. Made by **Harnischfeger Corp.,** Crane Div., 4606 W. National Ave., Milwaukee 46, Wis.

▲ For more details circle **NED-431 H4** on enclosed inquiry slip ▲

CAM CLUTCHES
for overrunning or backstopping



Self-Contained MC series of general duty cam clutches for overrunning, backstopping and indexing drive applications features two ball bearings that maintain concentricity of inner and outer races. Units have alternate low wedge angle cam and roller construction. Tapped holes in both ends of clutch accommodate cap screws or studs which attach sprockets, gears, pulleys or ratchet arms for drive requirements from 60 to 545 lb-ft. Models MC-4000, MC-5000 and MC-6000 are respectively rated 60, 95 and 195 lb-ft for indexing; 120, 190 and 380 lb-ft for overrunning; and 165, 270 and 545 lb-ft for backstopping. Made by **Morse Chain Co.,** Dept. ND, 7601 Central Ave., Detroit 10, Mich.

▲ For more details circle **NED-432 H4** on enclosed inquiry slip ▲

NEW COMPACT POWERFUL

ELECTRIC VIBRATOR

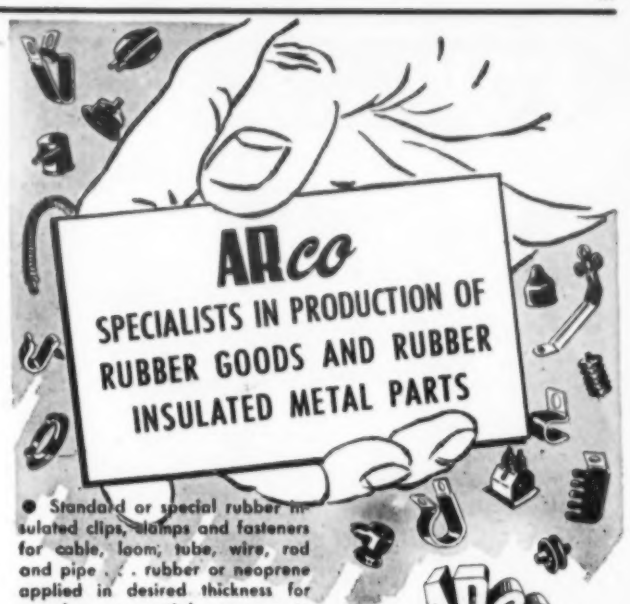
To speed the flow of stubborn material from hoppers, bins and chutes of all sizes and shapes.

Obtainable in all voltage, phase and cycle requirements.

Write today for complete literature.

THE CLEVELAND VIBRATOR CO.
2744 Clinton Avenue • Cleveland 13, Ohio

▲ For more details circle **NED-433 H4** on enclosed inquiry slip ▲



● Standard or special rubber insulated clips, clamps and fasteners for cable, loom, tube, wire, rod and pipe . . . rubber or neoprene applied in desired thickness for complete or partial coverage to metal stampings of any size or shape . . . ARco form dipped rubber parts, quickly, economically produced . . . these ARco products and services are helping development engineers solve problems and simplify purchasing for manufactures. Consult ARco engineers today.

Valuable literature available—Write today!

AUTOMOTIVE RUBBER COMPANY • INC.
Manufacturers • Designers • Engineers
12586 Beech Rd. • Detroit 39, Mich.
ARco RUBBER PROCESSORS
4033 Homestead Rd. • Houston, Texas

ANYTHING CAN BE COVERED WITH RUBBER BY . . . ARco

▲ For more details circle **NED-434 H4** on enclosed inquiry slip ▲

MERRILL
MATERIALS HANDLING DEVICES

MERRILL BROTHERS
56-13 ARNOLD AVENUE
MASPETH, N. Y.

▲ For more details circle **NED-435 H4** on enclosed inquiry slip ▲

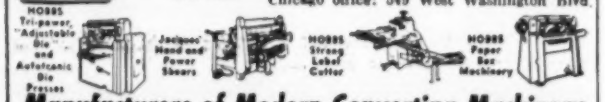
NOW . . . More Speed At Lower Cost

HOBBS Automatic Production Cutter

Electronic measuring and precise controls give you accurate, automatic, low-cost operation!

Easily handles paper, plastic, cloth, etc. up to 60" wide from extruders, laminators, "in-process" operations, or from rolls and sheets. Feeds, controls, measures and cuts soft "in-process" materials to uniform sheet sizes. Process rate is 10 to 100 feet per minute, depending on length of cut. Material can be accurately slit and cut in one operation, with added slitting attachment. Special feeding and take-away devices available for any production set-up. Get the facts on this new machine—estimate your immediate savings. Write *now* for details.

HOBBS MANUFACTURING CO.
41 Salisbury St., Worcester 5, Mass.
EST. 1883
New York Office: 132 Nassau Street
Chicago office: 549 West Washington Blvd.



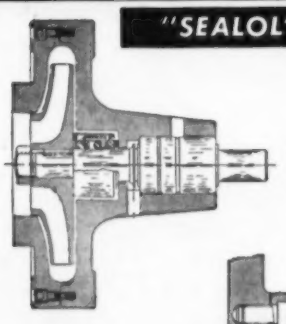
Manufacturers of Modern Converting Machinery

▲ For more details circle NED-436 H4 on enclosed inquiry slip ▲

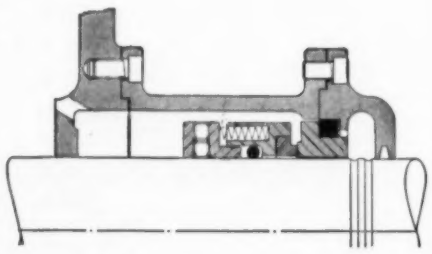
THIS NEWS TRAVELS FAST!

Where there's the WILL, "Sealol" is the WAY to get better sealing of rotary shafts. This balanced pressure mechanical shaft seal has proven itself in countless applications, handling the widest range of fluids, temperatures, pressures, and shaft speeds.

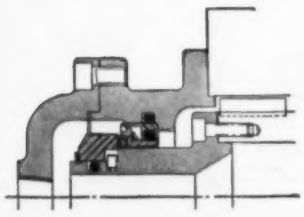
HERE ARE A FEW RECENT "SEALOL" APPLICATIONS:



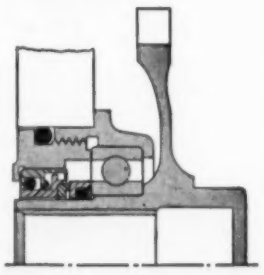
"SEALOL" FCB Water Pump Seal (water 55 PSI, 3400RPM)



"SEALOL" Chemical Pump Seal (dye liquor 20 PSI, 1750 RPM)



"SEALOL" Seal for Fluid Transfer (cutting oil 700 PSI, 3000 RPM)



"SEALOL" Seal for Power Take-Off . . . Gas Turbine Engine (oil mist 5 PSI, 6000 RPM)

If you have a sealing problem, chances are "SEALOL" CAN SEAL IT! Write for engineering recommendations. Sealol Corporation, 47 Willard Ave., Providence 5, R. I.

SEALOL
Chicago • Cleveland • Detroit • Los Angeles
New York • San Francisco

▲ For more details circle NED-437 H4 on enclosed inquiry slip ▲

ELECTRIC HEATING MANTLES for up to 650° C temperatures

Durable wear-resisting fabric is used in type R electric heating mantles for kettles or receptacles of 1 to 200-gal capacity used in pilot and production plants. Designed for temperatures up to 650° C, mantles can be used in distillation of chemicals, vapor-phase cracking in tubes, high temperature paint drying and baking, annealing of glass or metal and heat treating of textiles. Nichrome resistance wire element is woven into fabric spirally from bottom up. Spacing between coils is small at bottom, increasing toward equator of receptacle being used. Thus, area of greatest heat input is around bottom center. Made by **Glas-Col Apparatus Co.**, Dept. ND, 711 Hulman St., Terre Haute, Ind.

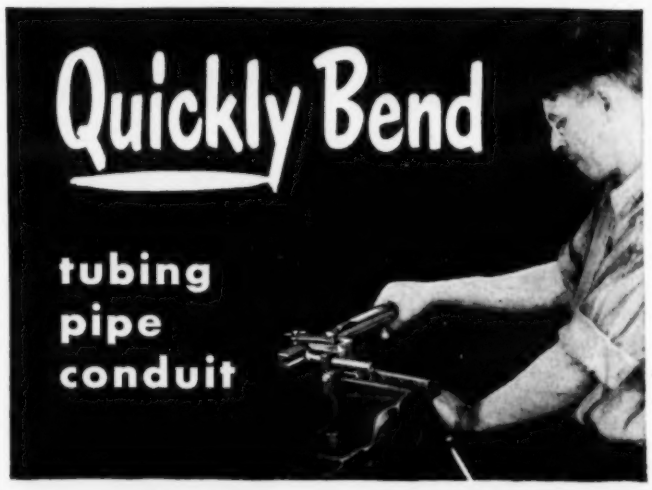
▲ For more details circle NED-438 H4 on enclosed inquiry slip ▲

ELECTRIC TYPING MACHINE punches and spaces data on tape for automatic reproduction of forms

Complicated forms can be typed with the Programatic Flexowriter electric typing machine without the operator having to take her hands from the keyboard or her eyes from the material she is typing, as all spacing movements are automatic. Basic Flexowriter punches information into a narrow paper tape for the operation of tape-operated office equipment. It can also read information from these tapes for automatic typing.

Programatic Flexowriter automatically performs all vertical and horizontal spacing functions required for a specific form, plus automatically punching preselected information in a by-product tape prepared at the same time as the original document. Tape can be wire transmitted to distant offices or used for automatic production of punched tabulating cards through a tape-to-card converter. Other tape-actuated office machines can also make use of the tape. Machine made by **Commercial Controls Corp.**, Dept. N, 1 Leighton Ave., Rochester 2, N. Y.

▲ For more details circle NED-439 H4 on enclosed inquiry slip ▲



. . . with a Greenlee Hand Bender

Forming small-radius bends without flattening or kinks is simple, speedy work with a GREENLEE Hand Bender. Lets you "custom tailor" your pipe, tubing, and conduit installations right on the job. Especially designed to form neat bends for sharp corners, nooks and other close quarters. Various models and sizes. Write for free Bender Book.

GREENLEE

GREENLEE TOOL CO., 1948 HERBERT AVE., ROCKFORD, ILL.

▲ For more details circle NED-440 H4 on enclosed inquiry slip ▲

Hundreds of machines available that were designed for special industry applications.

Let us know your problem. We'll be happy to submit recommendation.

If your problem is high speed coating of paint, varnish, glue, latex, etc. — POTDEVIN's sixty years of specialization in coating equipment can quickly help you solve it . . . guaranteeing initial low cost and top efficiency. Illustrated is just one of hundreds of special machines. It laminates rolls of materials up to 20" wide at speeds up to 50 feet per minute.

POTDEVIN MACHINE CO.
273 North Street • Teterboro, N. J.
Designers and manufacturers of equipment for Bag Making, Printing, Coating, Laminating, Gluing and Labeling.

▲ For more details circle NED-441 H4 on enclosed inquiry slip ▲

Complete Air Control In One Package

Compact Combination of All Three Units • • • Requires Only Two Connections

PSC Universal Air Control devices employ new principles in air regulation . . . Balanced Piston Regulators, Automatic lubrication with venturi action, Cyclone Filtering. All three devices are featured in the Combination Unit pictured above; other combinations are also available. The PSC line includes individual Air Lubricators, Filters, Regulators, Automatic Drain Traps, Dehumidifiers, Quick Disconnect Couplings, and Rotary Air Seals.

Write for Bulletin No. 75.

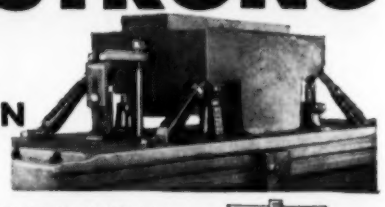
1. Atomizes exact amounts of oil by venturi action.
2. Balanced Piston Valve action adjusts to ¼ of a pound.
3. Wool Felt filters particles as small as 30 microns, as well as oil and water.

"Where *Good Connections* Count"®

PERFECTING SERVICE CO.
332 Atando Ave. Charlotte, N.C.
(Home Office & Factory)
Chicago Cleveland Providence New York Montreal Toronto

▲ For more details circle NED-442 H4 on enclosed inquiry slip ▲

ARMSTRONG SET-UP and HOLD-DOWN TOOLS



ARMSTRONG Set-up and Hold-down Tools reduce setting-up time—keep men and machines producing. Designed for use on planers, drill presses, milling machines, etc., they hold work securely and rigidly, and thereby reduce spoilage and prevent costly accidents.

Your local Armstrong Distributor carries ARMSTRONG Set-up and Hold-down tools in stock in sizes for every operation. Stop haphazard setting-up methods. Provide each of your machines with a full complement of ARMSTRONG Set-up and Hold-down Tools.

Write for circular

ARMSTRONG BROS. TOOL CO.
"The Tool Holder People"
5245 W. ARMSTRONG AVE. • CHICAGO 30, U.S.A.

▲ For more details circle NED-443 H4 on enclosed inquiry slip ▲

MODERN TIME AND COST SAVERS BUILT BY... Standard GRAVITY & POWER CONVEYORS

LIFT OR LOWER—FLOOR TO FLOOR WITH A

STANDARD INCLINEBELT

Move boxes, cases, cartons, sacks or bundles from basement to first floor, or any floor to floor — continuously with the Standard Inclinebelt. Compact — simple to install — minimum maintenance and attention. Lifts or lowers 10 to 20 lbs. of live load per ft.; floor elevations of 8 ft. to 14 ft. 6 inches inclusive; two belt widths to handle commodities 15½ inches to 25½ inches wide. Electric motor operated. Write for INCLINEBELT Bulletin — address Dept. NED-84.

STANDARD CONVEYOR COMPANY
General Offices: North St. Paul 9, Minn.
Sales and Service in Principal Cities

For more details circle NED-444 H4 on enclosed inquiry slip

PLASTICS EXTRUSION PRESS
hydraulically-operated 25-ton unit

Designed for producing ceramic and plastic extrusions, 25-ton hydraulic press permits almost continuous production rates. Simplified loading procedure and automatic de-airing of material cylinders are features. Two or more material cylinders can be used to allow simultaneous loading and extrusion. Press can readily be converted from horizontal to vertical extrusion. Operating valves, controls and hydraulic pressure gage are panel mounted. Model 232-25, pictured, is available with 16¼-in. long material cylinder of either 2⅜-in., 4 in. or other ID measurements, giving 11,000, 4000 psi or other extrusion pressure ratings. Extrusion rates are optional. Various other tonnages and material cylinder sizes can also be furnished. Made by **Loomis Engineering & Mfg. Co.,** 131 S. Fourteenth St., Newark 7, N. J.

For more details circle NED-447 H4 on enclosed inquiry slip

DEEP HOLE BORING

SAVE PRODUCTION TIME with our PROMPT ACCURATE SERVICE!

- GUN DRILLING - Lengths to 15 Ft.
- HOLLOW BORE - ¼" to 11" Diameter
- HOLLOW BORED FORGINGS - Up to 3000 lbs.
- HOLLOW BAR STOCK - To Specifications
- PRECISION HONING - 8 Micro-inch

Wire or Write . . .

HOLLOW BORING CORPORATION
85 Prescott Street
WORCESTER, MASS.

For more details circle NED-450 H4 on enclosed inquiry slip

OFFICE 1½ HP

FACTORY 7½ HP

UP TO 100 HP

How much Vacuum do you need?

It is wise to get a vacuum machine large enough the first time, because you will find so many new uses for vacuum in your plant. Spencer Industrial units start at 1½ HP—run up to 100 HP. For the factory offices, Spencer offers sturdy machines as small as ½ HP. Special vacuum tools for any purpose.

The Spencer representative has application data on more than 130 unusual uses — bulletin on request.

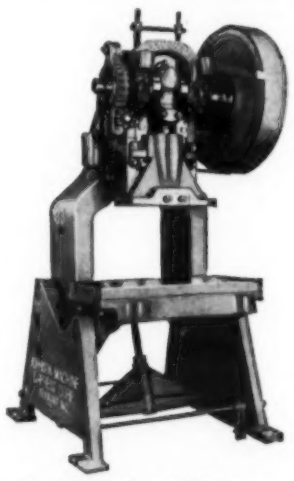
PERMANENT INSTALLATION

THE SPENCER TURBINE COMPANY • HARTFORD 6, CONNECTICUT
SPENCER HARTFORD
466-O

For more details circle NED-445 H4 on enclosed inquiry slip

OBI PUNCH PRESSES
27, 43 and 56-ton units

Models 33, 44 and 55 open-back inclinable punch presses are available in flywheel or geared types and with standard pin or Wichita air clutches. Model 33 is a 27-ton capacity unit with standard stroke of 2½-in. and up to 6-in. stroke available. Its bed size is 32 x 16 in. with a 21 in. opening through back. Flywheel design operates at 120 strokes per minute and geared design at 53 strokes. Model 44 is rated at 43 tons. Standard stroke is 4 in. and optional stroke is up to 8 in. Bed size is 32 x 22 in., and maximum shut height 25 in. Speeds are 105 or 46 strokes per minute. Model 55 is rated at 56 tons. Its standard stroke is 4 in., and optional stroke is up to 9 in. Bed size is 32 x 34 in. and speeds are 100 and 45 strokes per minute. Made by **Johnson Machine & Press Corp.,** Dept. NED-6, 620 W. Indiana Ave., Elkhart, Ind.



For more details circle NED-448 H4 on enclosed inquiry slip

DY-NAMIC BALANCING

reduces stress, produces smooth operation of our crankshafts . . . and makes it so EASY TO LOCATE EXACT POINT OF UNBALANCE . . .

QUICKLY, ACCURATELY!

says M. W. Stiller, Prod. Mgr., Joy Mfg. Co., Michigan City, Ind. A Model 375 "Bear" Machine is used here to balance crankshafts for portable air compressors.

Photograph shows operator drilling away excess metal at point of unbalance.

Speed and accuracy are but two of many advantages which make "Bear" Dy-Namic Balancing the proven technique to reduce wear of valuable machinery . . . eliminate noise and vibration . . . and improve performance of the finished product.

SEND FOR FREE DY-NAMIC BALANCING MANUAL to learn of all the advantages of "Bear" Machines, 20 pages of tables, diagrams, application photographs and latest technological developments help show you how Dy-Namic Balancing can cut costs, mechanical failures and maintenance expense in your operation.

For your copy write: Bear Mfg. Co., Dept. N-5, Rock Island, Ill.

298

"BEAR" STATIC AND DY-NAMIC BALANCING MACHINES
balance rotating parts weighing from 4 oz. to 8 tons

For more details circle NED-451 H4 on enclosed inquiry slip

New... Air Drill World's Smallest

It's Really Amazing!

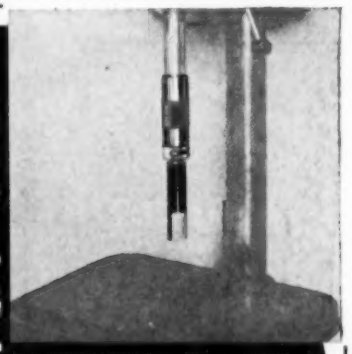
- 3/16" HEAVY DUTY DRILLING
- NEARLY 1/4 H.P. . . . STALLPROOF
- 1/4" LIGHT DUTY DRILLING
- WEIGHS LESS THAN 1½ LBS.
- USES 38% LESS AIR

Highest precision construction makes this drill revolutionary!
Write ARO or see your ARO distributor.
THE ARO EQUIPMENT CORP., BRYAN, OHIO
Offices in All Principal Cities
In Canada—Aro Equipment of Canada, Ltd., Toronto, Ont.

ARO
AIR TOOLS
Also . . . AIR HOISTS . . . LUBE EQUIPMENT . . . AIRCRAFT PRODUCTS . . . GREASE FITTINGS

For more details circle NED-446 H4 on enclosed inquiry slip

MAKES ANY DRILL PRESS A VERTICAL HONING MACHINE



SUPERIOR MD-1 MANDREL DRIVER

Speedier, more accurate hole finishing and sizing at half the cost of grinding or lapping.
Ideal for die work, bushings and dowel pin holes. Keyways and slots quickly honed to .0001 accuracy.
Permanent-type mandrel sizes .185 to 3.000 standard. Snap in place. Stones slide in and are securely locked by a twist of the cap. Size adjustable by turning driver body. Available in No. 2, 3 or 4 Morse tapers.
Use coupon today to get free literature.

SUPERIOR HONE CORPORATION
1613 Elreno Street Elkhart, Indiana
Please send free catalog on Superior Honing Machines.
NAME
FIRM
STREET
CITY & STATE
NAME OF SUPPLIER

For more details circle NED-449 H4 on enclosed inquiry slip

68 leak-proof joints in 2⅔ minutes

SIL-FOS brazing does it!

This job proves again that you can't beat SIL-FOS for brazing non-ferrous metals—and how easy it is to get fast, economical production with this low-temperature silver brazing alloy. Brazing return bends on the condenser and the evaporator of the FEDDERS room airconditioner is the job and below you see how it's done.

Return bends on condenser, with SIL-FOS rings preplaced, are gas-air burner brazed 3 rows at one time—40 joints in less than 1 minute. Evaporator bends are done same way—28 joints in 1⅔ minutes.

BULLETIN 20 TELLS HOW TO PLAN PRODUCTION BRAZING SETUPS that assure fast, low-cost metal joining. Write for a copy today.

HANDY & HARMAN 82 Fulton St., New York 38, N. Y.
Distributors in Principal Cities. In Canada: Handy & Harman of Canada Ltd., Toronto

For more details circle NED-452 H4 on enclosed inquiry slip

FOR PRECISION
Carbide Finishing
ELGIN DIAMOND
IN DYMO-C
...Designed for Carbides!

Where precision really counts, finishers specify ELGIN Diamond because they can be sure of:
- consistent accuracy—uniform cutting action
- flawless finishes every time, in less time

Actual field tests prove this new diamond abrasive up to 20% faster for finishing carbides.

Send for the DYMO-C bulletin today!
ABRASIVES DIVISION, Dept. E
ELGIN NATIONAL WATCH COMPANY
ELGIN, ILLINOIS

▲ For more details circle NED-455 H4 on enclosed inquiry slip ▲

ideas...worth
hundreds of dollars
for the price
of a 3¢ stamp

Here is a collection of interesting case histories of production and maintenance problems which were solved with almost unbelievable ease and speed by the unusual use of a hose clamp to fasten things together and "Hold 'em tight" in place. Send for Clampways Ideas" while you're thinking about it.*

"The Sign of a Good Hose Clamp"

PUNCH-LOK Company

*...or get your copy from your near-by Punch-Lok Distributor.

do it now

Punch-Lok Company
Dept. A, 321 North Justine Street
Chicago 7, Illinois

send me Clampways ideas FREE

Firm Name
My Name Title
Address
City State

4962

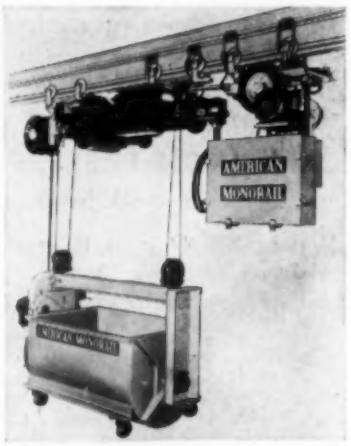
▲ For more details circle NED-456 H4 on enclosed inquiry slip ▲

COIL REEL & STAND
available in any desired capacity

Reel and stand are designed to reduce down time of production machinery by permitting direct feed of steel coils from reel. Reel is built to any capacity and the stand is a heavy-duty model, with ball bearing raceway for holding reel. Adaptors for reel are built to handle any size coil. Welded steel construction is used. Interchangeable reels can be placed on or lifted from the stand by either lift trucks or overhead crane. They can also be used to provide convenient space-saving coil storage. Made by **Palmer-Shile Co.**, 16015 Fullerton St., Detroit 27, Mich.

▲ For more details circle NED-457 H4 on enclosed inquiry slip ▲

OVERHEAD BULK CARRIER
automatic unit has roll-over bucket



Bulk materials can be intermittently transferred between a single loading point and any number of discharge stations with this automatic overhead carrier. It consists of a standard twin-hook electric hoist for raising and lowering the bucket which is equipped with casters for manual positioning on the floor. Bucket is geared to an electric motor which turns it one complete revolution at the discharge point. Electric controls for automatic dispatch, station selection and manual operation are carried on the unit. Made by **American MonoRail Co.**, 13116 Athens Ave., Cleveland 7, O.

▲ For more details circle NED-458 H4 on enclosed inquiry slip ▲

DO YOU KNOW? A simple approach to conservation of warehouse space through use of minimum aisles is offered in "Space Wheel," a circular type calculator. Purpose of device is to aid in selection of fork trucks. Chart shows aisle width required for right angle stacking with all types of fork trucks, area devoted to aisles, and savings made possible in cubic feet of storage space. Available from Lewis-Shepard Products, Inc., Dept. R-49, Watertown 72, Mass.

▲ For more details circle NED-459 H4 on enclosed inquiry slip ▲

COSTLY WORK BENCHES NEED NOT BE A "NECESSARY EVIL"
Investigate
INDUSTRIAL LAMINATED WOOD TOP BENCHES . . . still your best bench buy!

Nowhere else can you find a bench of such outstanding quality — with so many exclusive patented features — *for so low a price!* No other bench is so right for you for so many working needs. INDUSTRIAL BENCHES *last longer*...because they *stand up better*...made STRONG to begin with.

30 sizes and styles. *Send for complete catalog and prices.*

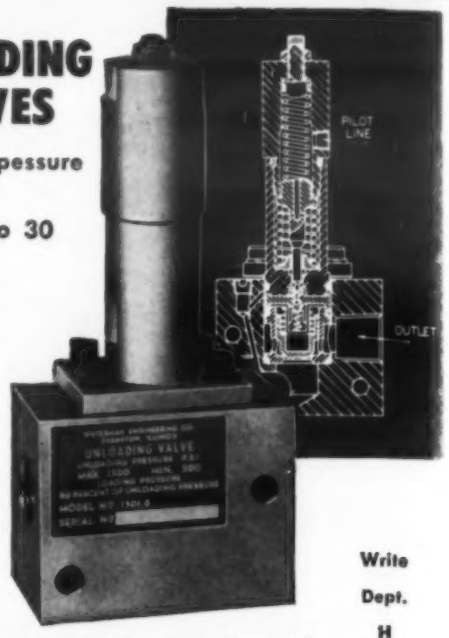
No. 1909

RIGID....
LOWER PRICED
24" wide, 5 foot long, 33 inches high.
Full laminated wood top made of selected hard maple on edge, 1¾" thick. All sections joined true and glued. Reinforced with concealed bolts. Tops finished, sanded and shellacked. Absolutely no bolts or screws protrude or show above top surface of bench.
IMMEDIATE DELIVERY. ORDER TODAY!
$58.85 K.D.F. F.O.B. NEW BRITAIN
Drawer, extra $8.25
Distributor's inquiries invited

INDUSTRIAL BENCH & EQUIPMENT MFG. CO., INC.
91 South Street • New Britain, Conn.
Benches — Steel, Maple Top, Welding • Machine Stands, Work Stands, Bench Legs, Tote Boxes.

▲ For more details circle NED-460 H4 on enclosed inquiry slip ▲

UNLOADING VALVES



For system pessure to 3000 psi

Flow rates to 30 G. P. M.

Waterman Unloading Valves are fast - acting long - lived, easily adjustable. Maintain desired pressure settings without continuous readjustment.

Hardened and ground poppets and seats eliminate leakage.

Large internal passages assure maximum flow with a minimum pressure loss.

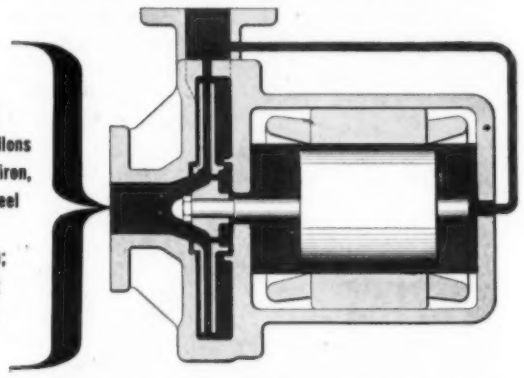
No external drain lines required.

Write Dept. H for Circular

Waterman Engineering Company
725 CUSTER AVENUE • EVANSTON, ILLINOIS

▲ For more details circle NED-461 H4 on enclosed inquiry slip ▲

Chempump
THE PUMP THAT CAN'T POSSIBLY LEAK
...no mechanical seals...no stuffing box



¼ to 3 horsepower, 0 to 180 gallons per minute; iron, stainless steel or monel construction; prices start at $96.00.

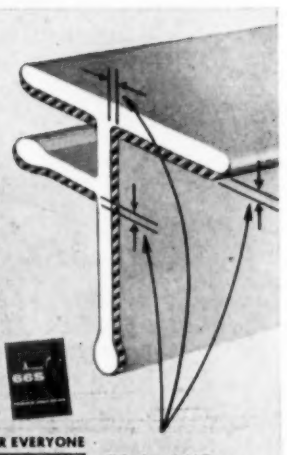
Think of what this means when handling toxic, corrosive or expensive process fluids. Chempump, with its magnetically-driven enclosed rotor can work—and save—for you, too. It is performance-proved in over 6 years of field experience. Write for complete data.

CHEMPUMP CORPORATION
1304 EAST MERMAID LANE • PHILA. 18, PA.

▲ For more details circle NED-462 H4 on enclosed inquiry slip ▲

New Harvey aluminum alloy 66S will reduce your costs

high-strength-low-cost-ratio



66S saves money by combining the high strength of 24S and the good corrosion resistance, weldability and economy of 61S. This new aluminum alloy cuts material and fabricating costs and reduces product weight. Tooling service charges are nominal and Harvey prepays the freight. Study the cost-saving advantages of Harvey 66S. Write for your Bulletin on 66S.

MAKING THE MOST OF ALUMINUM...FOR EVERYONE

HARVEY Aluminum

Made of 61S, extrusion above requires the full cross section. Using 66S saves material in shaded area, reduces costs 21%.

HARVEY ALUMINUM SALES, INC.
TORRANCE—LOS ANGELES, CALIFORNIA
BRANCH OFFICES IN PRINCIPAL CITIES

▲ For more details circle NED-463 H4 on enclosed inquiry slip ▲

Lightweight HELIARC TORCH

You can make high quality welds every time with this lightweight, 300 amp. HELIARC HW-10 torch. Both the torch body and power cable have all-internal water-cooling for cooler operation even when welding continuously at full capacity. Yet cleaning is easy for all water passages are straight. Electrode adjustment is quick and simple, too. No wrenches needed. And electrode stub loss is minimized by an improved water-cooling system. Call your nearest LINDE representative today for more details on the HELIARC HW-10 torch.

LINDE AIR PRODUCTS COMPANY
A DIVISION OF UNION CARBIDE AND CARBON CORPORATION
30 East 42nd Street UCC New York 17, N. Y.
Offices in Other Principal Cities
In Canada: DOMINION OXYGEN COMPANY, LIMITED, Toronto

The terms "Heliarc" and "Linde" are registered trade-marks of Union Carbide and Carbon Corporation.

▲ For more details circle **NED-464 H4** on enclosed inquiry slip ▲

COMPACT — VERSATILE!

New 4 in 1 Model 5108

S-N REVERSING TRANSMISSION

Insures smooth quick reversing under full load . . . in a single unit.

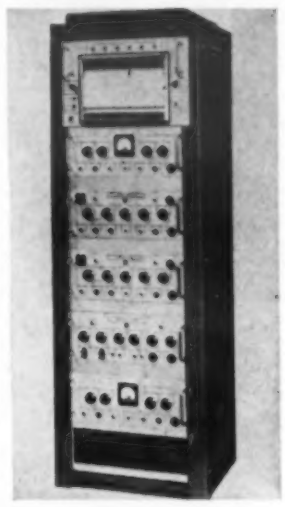
S-N engineers . . . world-famous gear makers . . . have perfected this highly versatile reversing transmission that is a midget in size, but truly a giant in power! Ideal for use with any equipment requiring transmission units up to 8 H.P. Offers the design engineer unlimited applications . . . especially for agricultural, materials handling equipment, construction and machine tools. Increases the versatility of the equipment in which it is installed, provides new economies in materials and assembly not available with ordinary transmission units.

A new illustrated folder indicating the wide range of applications for this new transmission is yours for the asking.

SNOW-NABSTEDT
Transmission Engineers
FOR NEARLY HALF A CENTURY
INDUSTRIAL DIVISION
THE SNOW-NABSTEDT GEAR CORP., HAMDEN, CONN.

▲ For more details circle **NED-465 H4** on enclosed inquiry slip ▲

MULTICHANNEL OSCILLOGRAPHS drive permits instant speed selection

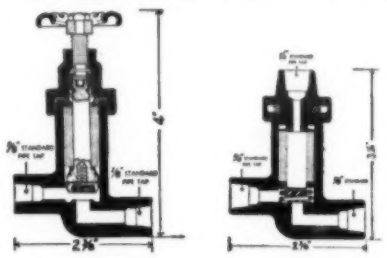


Multichannel direct writing oscillographs are available with four or six channel systems. Electrically controlled chart drive system permits instantaneous speed selection. Total range of 16 chart speeds is possible from 1 cm per hr to 250 mm per sec. Speeds can be selected by front panel control or accessory remote control. Basic chassis used throughout the series permits four channel models to be expanded to six channels if desired. Four or six channel chart paper can be used interchangeably on six channel models. Units can be mounted either on roller slides on a standard 19-in. rack, or in a bench or cart console. Ink or combination ink and electric writing units are available. Range is from 0 to 100 cps. Made by **Brush Electronics Co.**, Equipment Dept. RT-1, 3405 Perkins Ave., Cleveland 14, O.

▲ For more details circle **NED-466 H4** on enclosed inquiry slip ▲

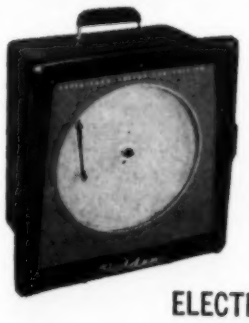
PACKLESS VALVES are bellows type for extreme pressure and temperature use

Standard models of bellows type packless valves are rated for service up to 150 psi from −65 to 250° F, and with minor modifications can be adapted for much greater extremes. Both hand and pneumatic - hydraulic operated models are available, the former having a ball-joint which permits straight vertical thrust to be transmitted through the bellows and valve stem. All-metal construction makes valves suitable for high vacuum applications in laboratory equipment and for exhaust systems for hermetically sealed products such as electronic equipment, aircraft components and mass spectrometers.



For handling volatile liquids, gases or corrosive fluids, valves can be furnished with bellows of such metals as stainless steel or Monel. Pneumatic-hydraulic operated model uses line pressures from 10 to 150 psi and has spring-loaded valve seat to insure positive opening. Inlet and outlet fittings are ⅛-in. female pipe tap on both valves. Made by **Clifford Mfg. Co.**, 124 Grove St., Waltham 54, Mass.

▲ For more details circle **NED-467 H4** on enclosed inquiry slip ▲



Fielden TEKTOLOG

ELECTRONIC RECORDER

- *Accurate to ±1% of Full Scale*
- *Operates directly from Low Energy Sources*
- *Simplified Design— Only 4 Principal Units*
- *Available with Electric or Pneumatic Controls*

The Fielden TEKTOLOG has a sensitivity of ±0.1%, mechanical reproducibility of ±0.5%, yet because of its simplified design, circuitry and construction is priced substantially lower than other types. Various recording speeds to suit applications. Pen equipped with non-clogging capillary tip suitable for high or low speed recording auxiliary control apparatus. Available with dust-tight, weather-proof cast aluminum housing. Easily installed . . . flush or surface mounted. Can be supplied with portable carrying case for mobility since critical leveling is not needed. Designed for *accurate* recording at low cost. Write today for details to **Dept. F**

Robertshaw-Fulton
CONTROLS COMPANY
FIELDEN INSTRUMENT DIVISION
2920 N. 4th St., Dept. F Philadelphia 33, Pa.

Dollar for Dollar— Your Best Instrument Value

▲ For more details circle **NED-468 H4** on enclosed inquiry slip ▲

they're SELF-LOCKING

IN ANY POSITION

on a threaded member

FLEXLOCS stay put in any position on a bolt or stud the moment the locking threads are fully engaged; they do not have to be seated. And FLEXLOCS stay tight, no matter how severe the vibration; are one piece, all metal; can be used repeatedly. One nut covers a temperature range up to 550°F. Call upon your local industrial distributor for literature and samples or write STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

FLEXLOC LOCKNUT DIVISION SPS JENKINTOWN PENNSYLVANIA

▲ For more details circle **NED-469 H4** on enclosed inquiry slip ▲

Control Horsepower with the

A-C Starter Line

the RIGHT control for every need

ALLIS-CHALMERS **Motor STARTERS**

For across-the-line control of motors operating on 110 to 600 volts, Allis-Chalmers offers:

MANUAL STARTERS — Suitable for mounting on small machines. Start and stop buttons on starter. Sizes 0 and 1 for motors to 7½ hp.

MAGNETIC STARTERS — Provide convenience of local or remote control...thermal overload protection and undervoltage protection or release. Sizes from 0 to 7 for motors from fractional to 600 hp.

COMBINATION STARTERS — Save installation time and wiring costs when both a magnetic starter and disconnect switch are required. Sizes 0 to 5 for motors to 200 hp.

Contact your nearest A-C representative or write Allis-Chalmers, Milwaukee 1, Wisconsin for Bulletin 14B7132A.

ALLIS-CHALMERS A-C A-4360

▲ For more details circle **NED-470 H4** on enclosed inquiry slip ▲

KODAGRAPH MICRO-FILE EQUIPMENT

Here's everything you need for a low-cost, trouble-free microfilming operation . . . one that will meet *your* individual requirements.

- **Kodagraph Micro-File Machines**—four separate models designed to meet a variety of conditions. *Each* a high-precision unit which can be operated by anyone.
- **Kodagraph Micro-File Film**—extremely fine grained, high resolution. Assures sharp, crisp rendering of all details.
- **Kodagraph Film Readers,** which permit you to view your films quickly, conveniently.
- **Kodagraph Micro-File Enlarger,** which enables you to make paper enlargements from 16mm. and 35mm. microfilms which are comparable in clarity to the originals.
- **Kodagraph Print Film**—ideal for making positive copies of negative microfilm records.

Write today for free illustrated booklet giving full information.

EASTMAN KODAK COMPANY
Industrial Photographic Division
Rochester 4, N. Y.

Kodak

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Experienced in producing coined blanks of every description, Pix has the skill and the facilities to meet your needs. More . . . you get dependable supply, geared to your production schedules. Try Pix for blanking, coining, shaving and slotting on a production basis to tolerances of ±.001". Precision work in steels, nickel, molybdenum, bronzes and many alloys. Complete catalog available.

SEND SKETCH OR PRINT FOR 48-HOUR QUOTATION

Get Better Production

Try PIX for Precision Coining

PIX MANUFACTURING CO., INC. 5 Oliver Street Newark 5, N. J.

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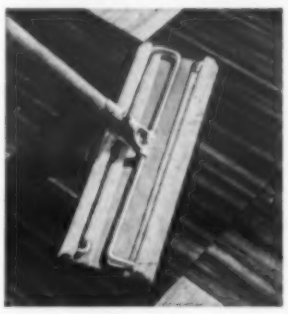
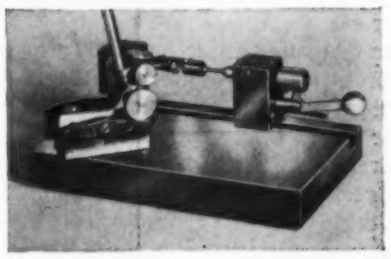
FLOOR WAX APPLICATOR
mohair pad can be laundered



Swivel handle of this lightweight aluminum floor wax applicator enables the user to manipulate it around and under furniture and other obstructions. Replaceable Timmietuft (mohair) applicator pad measures 3½ x 12 in. and is shrinkproof and washable. Made by **Fuller Brush Co.,** Dept. NED, 3530 Main St., Hartford 2, Conn.

▲ For more details circle NED-475 H4 on enclosed inquiry slip ▲

BENCH CENTER
for inspecting miniature parts



Inspection of miniature parts is facilitated by this YBC-1 bench center which measures 9 x 5⅞ x 1⅛ in. at its base. Placement of center post keyway to one side leaves space for setting up indicating equipment on the base. Base is ground on all sides, allowing a variety of setups and checking on all planes. Bench center can be used with surface plate or sine table by unscrewing its removable legs. Features include one-hand adjustment of live center post, removable live and dead centers, replaceable springs and easily regulated sliding fit of live center. Made by **Transicoil Corp.,** Dept. NED, 107 Grand St., New York 13, N. Y.

▲ For more details circle NED-476 H4 on enclosed inquiry slip ▲

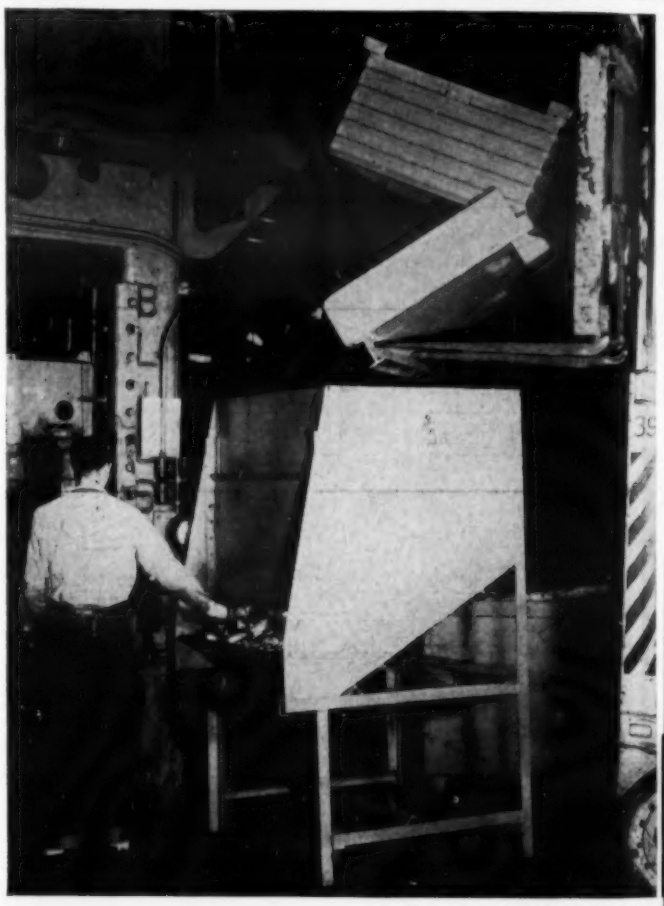
CONDUIT UNION
explosionproof and self-adjusting

Two-part explosionproof expansion type conduit union is designed for easy installation, with diameter kept to a minimum. Permanently assembled at the factory, it requires only two tightening operations to install. Self-expanding feature prevents explosions due to improperly mated contact surfaces. Built-in phosphor-bronze spring insures positive grounding. Made by **Appleton Electric Co.,** 1758 Wellington Ave., Chicago 13, Ill.

▲ For more details circle NED-477 H4 on enclosed inquiry slip ▲

Houdaille Mag

▲ For more details circle NED-4 H4 on e



▲ For more details circle NED-4 H4 on e

For Insulating Bus Bars

PERMACEL TAPES

Find out how you can use self-sticking tape...write Permacel Tape Corporation, New Brunswick, N. J.

▲ For more details circle NED-473 H4 on enclosed inquiry slip ▲

FREE
air compressor fact folders

Get the low-down on air compressors — ask today for these new fact folders.

They tell you all about air compressors — how to select them, how to care for them and how to put them to work at new and different jobs.

Write to Worthington Corporation, Section PC. 4.13B, Merchandising Division, Harrison, N.J.

PC.4.13

WORTHINGTON

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ULTRA-CHEX GAGE BLOCKS for Every Need!

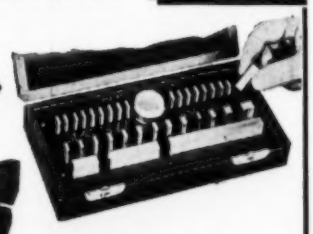
Supplied in one Superior Accuracy

5 MILLIONTHS ± ACCURACY

9 Block Set $22.50
OPTICAL PARALLEL $5.00

Quick Delivery on Small Standard Sets

34 Block Set $125.00
INCLUDING OPTICAL PARALLEL



82 Block Set $275.00 Complete

This Set will supply the needs of any discriminating shop that must work to gage-block precision.

All Sets at "Money Saving Prices" due to Mass Production Methods.

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Dealers: Here's a real profitable line!

GEORGE SCHERR CO., INC.
COMPLETE LINE OF PRECISION INSTRUMENTS
200-ND LAFAYETTE ST. • N.Y. 12, N.Y.

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How to
REDUCE BEARING REPLACE ENT

Get The ONE Spherical That asts

2 to 3½ times LONGER

That's right—this *improved* SKF (Type "C") Sphe Roll Bearing provides, size for size, 2 to 3½ times more life, to 50 increased capacity . . . more than any design available any re . . . no increase in price.

Obviously, when you tell your SKF Distributor you nt th Type "C" Spherical, you're minimizing future replacemen cost. And your SKF Distributor has many availab sizes in stock.

Have him *show* you how the famous SKF spheric design has been improved to deliver this exception capacity and life. SKF INDUSTRIES, INC., PHILADELPH 32, PA.—*manufacturers of* SKF *and* HESS-BRIGHT® *bearings.*

▲ For more details circle NED-4 H4 on e

Magnetic separator

FOR AUTOMATIC, LOW-COST REMOVAL OF FERROUS METALLIC PARTICLES FROM COOLANTS AND CUTTING OILS

used in

GRINDERS • MILLING MACHINES • GEAR SHAPERS • DRILLING MACHINES
HONING MACHINES • BROACHING MACHINES • and many others

NOW . . . a *completely new* Magnetic Separator designed to remove ferrous metallic particles and sludge from liquid coolants, mineral oils and soluble oil solutions used in all types of metal finishing operations. Automatic, continuous cleaning of coolants with the Houdaille Magnetic Separator means:

- Increased Production
- Longer Wheel & Tool Life
- Better Finishes with Fewer Rejects
- Greater Safe-Use Life of Oil or Coolant
- Lower Operating and Maintenance Costs

important features:

Easy Installation on Machine Tool Sump — Flexible design permits choice of three inlets and two outlets. Small, compact unit requires little or no extra floor space.

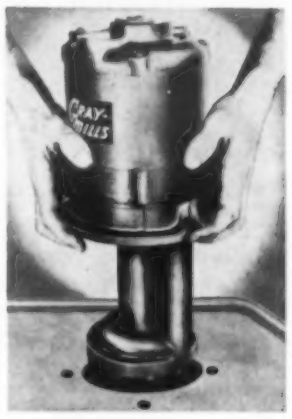
360° Constant Magnetic Attraction —Permanent ring magnets enclosed in revolving cylinder provide 360° of magnetic attraction. Evenly distributed; no spottiness.

Economical, Trouble-Free Operation—Separator uses 1/70 hp. gear head motor (TENV). Features smooth, automatic operation. Nothing to lubricate, nothing to get out of order.

Write today for Equipment Bulletin giving complete details.
HONAN-CRANE CORP. 405 Wabash Ave., Lebanon, Indiana
a subsidiary of **HOUDAILLE-HERSHEY CORP.**

NED-4[illegible] H4 on enclosed inquiry slip ▲

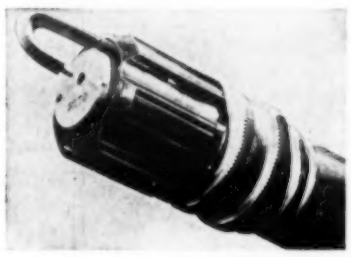
COOLANT PUMP
delivers 17 gpm at 12-ft heads



Immersion type H-6000 centrifugal coolant pump will handle liquids over a wide range of viscosities and is unaffected by abrasives. Compact unit delivers 17 gpm at 12-ft head with water. Discharge outlet is placed above mounting flange to facilitate installation. Standard immersion lengths of 6½ and 8½-in. are available. Shaft and moving parts are enclosed and protected by pump casting. Made by **Graymills Corp.**, Dept. C, 3717 N. Lincoln Ave., Chicago 13, Ill.

▲ For more details circle **NED-482 H4** on enclosed inquiry slip ▲

FOG JET NOZZLE
also delivers straight stream



Twist of plastic handle on Mister Jet attachment for garden type hose changes its far reaching straight stream to an extra fine fog. The finely atomized water is effective in fighting fires. Nozzle is nonclogging and is made of aluminum and stainless steel with a shockproof red plastic handle. Made by **Bete Fog Nozzle Inc.**, 305 Wells St., Greenfield, Mass.

▲ For more details circle **NED-483 H4** on enclosed inquiry slip ▲

INDUSTRIAL COOLER
for freeze treating of metals

Chamber of this industrial cooler is designed to cool steel tools, parts or dies to about −120° F so that relatively soft elements in the steel are transformed to hard strong constituents. Steel thus treated does not change in structure over a period of time. Quick draw-down of temperature is achieved with the cascade system of cooling. Freon 13 and 22 are used. Cooler is self-contained, being ready for operation upon connection of power and water. Made by **Conrad, Inc.**, 60 W. Fourth St., Holland, Mich.

▲ For more details circle **NED-484 H4** on enclosed inquiry slip ▲

TOOL of a THOUSAND USES

TRI-SAW, All-Purpose, Portable Power Hacksaw

Still the same low price. ONLY $37.50

Makes Any Cutting Job Quick . . . Easy . . . Economical

Simply attach Tri-Saw to any 1/4" or 5/16" heavy duty drill—then zip through wood, sheet metal, heavy metal, nails, pipe and what have you, in seconds! Use this sensational time and work saving tool and you'll say it's the best all-purpose saw on the market. Only Tri-Saw gives you these exceptional features:

- No side torque or spin
- One shot lubrication
- Completely replaceable high speed bearings
- Improved dirt seal
- Needs no starting hole

See Tri-Saw at your jobber or write us for descriptive literature

MANUFACTURED BY
TRI-SAW CORPORATION
2207 HANLEY INDUSTRIAL COURT • ST. LOUIS 17, MISSOURI

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C/R JAW-HEAD

The best "soft" hammer your money can buy!

Tough, resilient water buffalo faces deliver plenty of power with full protection for delicate parts and finishes. Faces are easily replaced, and comfortable Safety-Flare handle gives you non-slip grip. Work goes better with a C/R RAWHIDE Jaw-Head. See for yourself.

• **Available from leading industrial suppliers. Also C/R Rawhide mallets and Rawhide mauls. For further information write Dept. 22.**

CHANGE FACES IN SECONDS

CHICAGO Rawhide MFG. CO.
1301 Elston Ave. Chicago 22, Illinois
In Canada: Super Oil Seal Mfg. Co., Ltd., Hamilton, Ontario

▲ For more details circle **NED-487 H4** on enclosed inquiry slip ▲

Production cost down 38.6% with WORK-O-MATIC* work-level equipment on the job!

WHEN you *succeed* in reducing costs, you're in line for a greater share of today's competitive market . . . and greater profit! One sure way is with new Work-O-Matic equipment. There's proof!

Take the typical operation shown at left. First, work-level positioning eliminates waste motion; cuts costs by 18.8%. Secondly, since the hopper, with parts reservoir, holds a mass supply at the use point, there's no *waiting* for material. An extra hour of work is realized. The *total* saving is 38.6% per 8 hour day!

For detailed time and motion studies; for information on the various Work-O-Matic units now available, write to The Union Metal Manufacturing Company, Canton 5, Ohio.

**Patent No. 2,445,038. Other patents pending.*

UNION METAL
Material Handling Equipment

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ACEMENT COST

That asts

ONGER

Sphe Roller
re life, to 50%
le any re . . . at

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DELPH
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SKF®
BALL AND ROLLER BEARINGS

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to solve SPRAY NOZZLE problems

get your free copy of
SPRAYING SYSTEMS CO. CATALOG NO. 24

48 pages of spray nozzle reference data . . . the most complete catalog of its kind ever produced.

let a SPRAYING SYSTEMS CO. sales engineer help you

. . . his specialized experience is yours for the asking.

write to . . .

SPRAYING SYSTEMS CO.
Engineers and Manufacturers
3211 Randolph Street • Bellwood, Illinois

▲ For more details circle **NED-485 H4** on enclosed inquiry slip ▲

VARGLAS permafil SLEEVING

Shortly after our first announcement of Varglas Permafil Tubing, engineers began praising its many features — especially its extra flexibility and toughness.

Now, for the first time, Varglas Permafil Sleeving is available in N.E.M.A. grades C-2 and C-1. This new sleeving is lighter coated than the Permafil Tubing but it frequently does the insulating job where tubing was formerly used — and, of course, the cost is much less. Available in coils. Write for free test samples and prices.

VARFLEX CORPORATION
510 W. Court St. Rome, N. Y.

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Your ONE dependable MIXER for almost every batch mixing job!

PATTERSON TYPHOON PORTABLE POWER MIXER

Light, sturdy, easily carried from batch to batch. Direct Drive and Geared Drive models. ¼ to ¾ H.P. Write for catalog today

The Patterson Foundry and Machine Company
East Liverpool, Ohio, U. S. A.
NEW YORK, BOSTON, BALTIMORE, PHILADELPHIA, PITTSBURGH, DETROIT, CINCINNATI, ATLANTA, CHICAGO, ST. LOUIS, HOUSTON, DENVER, LOS ANGELES, SAN FRANCISCO, SEATTLE
The Patterson Foundry and Machine Company, (Canada) Limited
Toronto, Canada
MONTREAL

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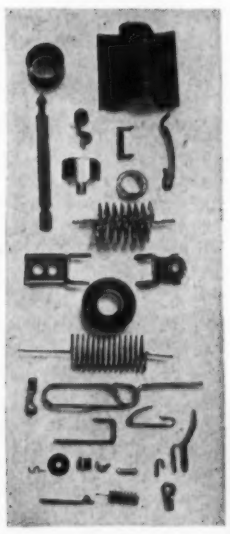
Priced Right!
WIRE FORMS & Metal Stampings



High-speed, quality production with custom-made precision. Wire formed to any shape for every need.

WIRE FORMS
.0015 to .125 diameter

STRAIGHTENING & CUTTING
Perfect straight lengths to 12 ft.
.0015 to .125 diameter

SMALL METAL STAMPINGS
.0025 to .035 thickness
.062 to 3 inches wide

Specializing in Production of Parts for Electronic, Cathode Ray Tubes and Transistors

Write for illustrated folder. Send Blueprints or Samples for Estimate.

ART WIRE and STAMPING COMPANY
15 BOYDEN PLACE
NEWARK 2, N. J.

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DO YOU KNOW THESE FACTS ABOUT PRE-FINISHING?

Know how to keep your finishing process from becoming outdated? Switch to prefinished ENAMELSTRIP. A few facts about this pioneer process will show you it pays to finish the modern, ENAMELSTRIP way:

- Coats and colors metal before fabricating.
- Eliminates costly operations.
- Comes precision-slit to your specifications in a choice of metals.
- Non-anodized organic finish, withstands all Fabricating stresses.
- Finished in one, or two colors (one on each side).

GET ALL THE FACTS ON ENAMELSTRIP in our new full-color bulletin. Send for yours today.

THE COATED COIL CORPORATION
507 West 30th Street, New York 1 • LOngacre 5-3161

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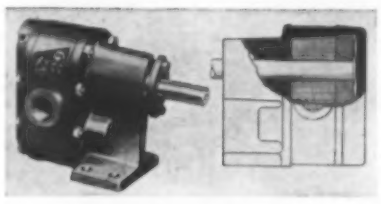
TAPERED GEAR PUMP
handles 18 gpm at up to 250 psi



Liquids containing materials of an abrasive nature or foreign matter can be handled efficiently by the model U-3 tapered gear pump. It will maintain its initial mechanical and volumetric efficiency as taper design automatically takes up any wear without effect on clearances. Unit attains a 29-in. vacuum level under conditions of restricted flow. With a normal capacity of 8 gpm, pump will deliver up to 18 gal at 1000 rpm shaft speed, at pressures up to 250 psi. Made by **East Shore Machine Products Co.**, Dept. 15, 50 E. 201st St., Cleveland 23, O.

▲ For more details circle NED-492 H4 on enclosed inquiry slip ▲

TUBE FLARING TOOLS
flare has double lap for strength

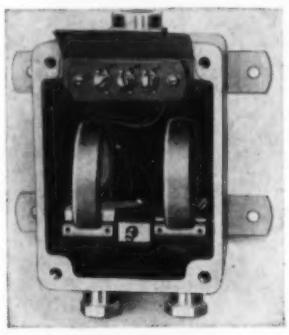
Two tools for making double lap flares on brazed or welded steel, or copper and aluminum tubing are now available. Model 250-F makes 45-degree flares, while model 255-F produces 37 - degree flares. Double lap helps prevent cracking or splitting of tube and withstands frequent tightening without "washing out." In first operation, tube is belled, as shown in Fig. 1, then folded down over itself in second step, as shown in Fig. 2. Gage assures correct size flare every time. Tools will also make single flares. Made by **Imperial Brass Mfg. Co.**, 510 S. Racine Ave., Chicago 7, Ill.

Fig. 1

Fig. 2

▲ For more details circle NED-493 H4 on enclosed inquiry slip ▲

PRESSURE SWITCH
operates relays, solenoids, controls



Pressure difference between two variable pressures, or a variable and reference pressure is sensed by model 532 Meletron pressure switch, available in four classes of proof pressures from 500 to 12,000 psi. Intended for operating relays, solenoids and motor controls, switch permits opening or closing of circuit on increasing or decreasing pressure difference from 15 to 10,000 psi at any point within unit's adjustable range. Two highly accurate parallel bourdon tubes comprise sensing element. Unit operates in any position and is housed in splashproof enclosure. UL-approved snap-action, single-pole, double-throw switching element for alternating and direct current circuits is employed. Made by **Barksdale Valves**, Dept. NED, 5125 Alcoa Ave., Los Angeles 58, Calif.

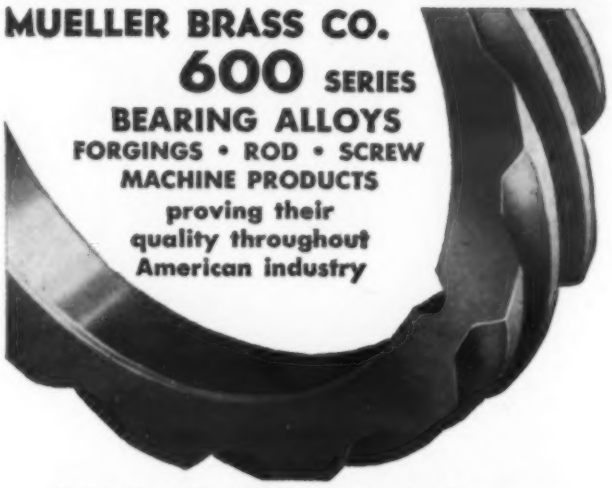
▲ For more details circle NED-494 H4 on enclosed inquiry slip ▲

VALVE OPERATOR TERMINALS
standardized reach rod components

Remote control of valves requiring short lengths of flexible shafting and reach rods, or reach rods alone, is possible with this line of standardized remote operating terminals. Line includes remote operating stations, universal joints, valve couplings and geared joints. Remote operating stations can be either bolting flange or welding type, and valve couplings are available for nonrising handwheel, rising stem and rising handwheel valves. Couplings are offered with or without quick-disconnect feature and with male or female connections. Geared joints (to be available soon) are adjustable through 360 degrees. Made by **Stow Mfg. Co.**, 26 Shear St., Binghamton, N. Y.

▲ For more details circle NED-495 H4 on enclosed inquiry slip ▲

MUELLER BRASS CO.
600 SERIES BEARING ALLOYS
FORGINGS • ROD • SCREW MACHINE PRODUCTS
proving their quality throughout American industry



Mueller Brass Co. "600" series bearing bronzes are lightweight, high strength copper-zinc base alloys with excellent bearing and mechanical properties, non-galling and non-seizing characteristics and good resistance to corrosion. There are six members of the "600" series . . . one for every purpose. Write today for complete information about the MUELLER BRASS CO. "600" series alloys for forgings, rod or screw machine products.

MUELLER BRASS CO. 119-A
PORT HURON 27, MICHIGAN

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Newark Wire Cloth is made of *all* malleable metals such as aluminum, brass, bronze, phosphor bronze, copper, monel, Nichrome, nickel and stainless steel; as well as the noble metals such as gold, silver, platinum, etc.

This wide range of metals enables you to select the one wire cloth to meet your conditions of corrosion and/or contamination.

In all metals, Newark Wire Cloth is accurately woven in a wide range of meshes, ranging from very coarse (4 inch space cloth), to extremely fine (up to 400 mesh). Our reputation for 'Accuracy' through more than 75 years is your guarantee of wire cloth quality.

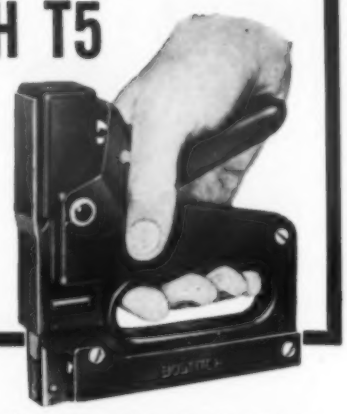
We maintain a large stock of popular sizes in the more commonly used metals and can make prompt shipment. Let us quote on your requirements.

Send for our New Catalog E.

Newark Wire Cloth COMPANY
351 VERONA AVENUE • NEWARK 4, NEW JERSEY

▲ For more details circle NED-497 H4 on enclosed inquiry slip ▲

BOSTITCH T5 TACKER



One in the hand is worth two men with hammers and tacks!

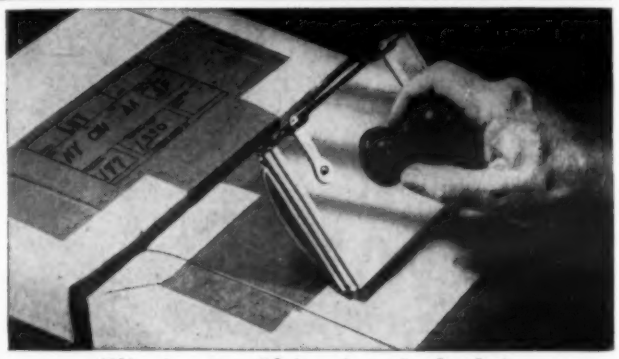
- Just about twice as fast—that's how manufacturers and contractors compare the Bostitch T5 Tacker to hammer and tacks.
- There are other big advantages. The T5 Tacker permits accurate locating of staples, even in tight spots. Drives staples to within 1/16" of corners, penetrates deep into hard or gummy woods. One-hand operation leaves other hand free for holding or aligning material. Equally important, workers like it.

Fasten it better and faster with

For more information about the Bostitch T5 Tacker and for application details, write BOSTITCH, 688 Mechanic St., Westerly, R. I.

BOSTITCH
STAPLERS AND STAPLES

▲ For more details circle **NED-498 H4** on enclosed inquiry slip ▲



Eliminate Shipping Labels!

PRINT DIRECT

Speeds Up Freight Marking

Quick! Accurate! Easy! Print shipping information direct on cartons, boxes, packages. Eliminate double operation of preparing labels and then pasting them to the containers. Get 1,000 or more clear, sharp impressions from one stencil without re-inking. New FORM-CUT® Stencil has facsimile of your label or shipping form die-impressed into the stencil. Then type or write in address or identification data . . . attach to duplicator . . . and print, like using a rubber stamp. Write for Literature and FREE SAMPLE FORM-CUT STENCIL AND PRINT.

THE ORIGINAL HAND STAMP STENCIL DUPLICATOR

Also for addressing shipping tags and labels . . . prints postcards, menus, forms, bulletins. 8 complete outfits: $9.50 to $99.50, including supplies (f.o.b. factory). At office or shipping room supply dealers.

OVER 30 YEARS **MULTISTAMP** STENCIL DUPLICATOR ®

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New BORG MICROPOTS

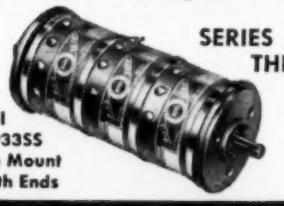
The new standard for Precision Multiturn Potentiometers . . . Eliminates the necessity for special designs.

Models Available for Test and Evaluation

SERIES 901-903 TEN-TURN POTENTIOMETERS

Model No. 902S Servo Mount at One End

Designed for utmost versatility and adaptability. New standard Borg Micropots are available in single or double shaft models with exceptionally rigid Servo-mount or bushing-mount at either or both ends.



SERIES 931-935 THREE-TURN POTENTIOMETERS

Model No. 933SS Servo Mount at Both Ends

WRITE TODAY FOR COMPLETE INFORMATION

BORG EQUIPMENT DIVISION
THE GEORGE W. BORG CORPORATION
JANESVILLE, WISCONSIN

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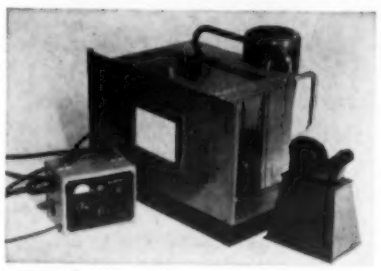
TAB CUTTER
foot-powered unit cuts or punches

Foot - operated tabbing and multiple hole punching machine will tab cut 1-in. lifts of material and can also be used for punching multiple holes, round cornering or straight line cutting. It will handle such materials as paper, leather, fabrics, light metals and plastics. Tabbing knives are adjustable for cutting tabs up to 6-in. long and 3/8 or 1/2-in. high. Holes any size or shape can be punched 20 in. apart, center to center on lifts of material up to 1/4-in. thick. Tabbing knives for cutting either 3/8 or 1/2-in. high tabs are available from stock, as are punch heads in various designs and sizes. Made by **Southworth Machine Co.,** 31 Warren Ave., Portland, Me.

▲ For more details circle **NED-501 H4** on enclosed inquiry slip ▲

PORTABLE X-RAY UNIT
examines light metal, rubber, plastic, porcelain, glass objects



Portable, self - contained Norelco MG60 fluoroscopy and radiography unit is practical for production x - ray examination of objects made from light metal, rubber, plastics, porcelain and glass. It detects foreign metals, locates contact parts and connectors in insulating materials and aids control of fabric layers in rubber. Components include x-ray source, control unit and fluoroscopy box. X-ray unit houses tube with 1-mm focal spot plus the high voltage and filament transformers in small oil-filled tank. Built-in air circulator cools unit and a large handle facilitates positioning.

High voltage is switch controlled in steps of 5 Kvp between 30 and 60 Kvp. Parts to be examined are arranged directly behind fluorescent screen in front panel and can be held stationary or moved as required. Radiographs can be taken directly on object or in fluoroscopic box which has removable cassette frame.

Unit takes power from standard 110 or 220-v ac supply. Current consumption is about 2 amp and permissible continuous output is 4 ma at 60 Kvp. Made by **North American Philips Co.,** Research & Control Instruments Div., 750 S. Fulton Ave., Mt. Vernon, N. Y.

▲ For more details circle **NED-502 H4** on enclosed inquiry slip ▲

50 years in the making

BLACKMER'S "Gold Seal" TRUCK PUMP

Long life and economical operation is assured **BLACKMER'S** customers with a new design which represents 50 years of experience in building the famous Rotary Pumps which are,

"SELF-ADJUSTING FOR WEAR"

The new design incorporates all of the time tested **BLACKMER** features plus:

The BLACKMER CARTRIDGE-TYPE *Mechanical Shaft Seal. Heavy Duty Anti-friction Bearings completely protected from the pumpage.*

Available in two sizes, 2½" and 3", rated at 100 GPM and 200 GPM respectively. "Listed by Underwriters' Laboratories, Inc."

Write for complete details.

liquid materials handling

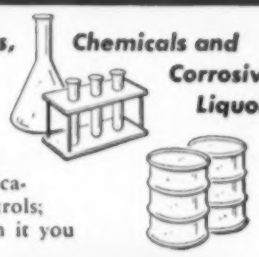
BLACKMER

Industrial, Hand and Truck Pumps, Strainers, Pressure Control Valves
BLACKMER PUMP COMPANY, GRAND RAPIDS 9, MICH.
DIVISION SALES OFFICES — NEW YORK • ATLANTA • CHICAGO
GRAND RAPIDS • DALLAS • WASHINGTON • SAN FRANCISCO
See Yellow pages for your local sales representative

▲ For more details circle **NED-503 H4** on enclosed inquiry slip ▲

ALL STAINLESS STEEL METER
MEASURES CORROSIVE LIQUIDS

Measures Foods, Pharmaceuticals, Chemicals and Corrosive Liquors



Constructed *inside and out* of stainless steel, this meter resists corrosive attack and is easy to clean. With it you can get positive metered identification for inventory and cost controls; for tax analysis purposes. With it you can also get accurate quantity control over liquids entering into batch mixed formulas. Rated capacity 100 gpm. Automatic shut-off registers and remote registration systems can be furnished. Write for bulletin OG-403 *Rockwell Manufacturing Co., Dept. D-5404R Pittsburgh 8, Pa.*

YOU CAN RELY ON ROCKWELL

Rotocycle meter, cut away to show the all-revolving rotor construction.

ROCKWELL INDUSTRIAL METERS

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FREE to Design, Plant, and Safety Engineers

A NEW, COMPLETE REFERENCE FILE OF BARKSDALE HYDRAULIC and PNEUMATIC CONTROLS

It includes important general information such as a detailed description and illustration of the Shear-Seal principle, the only new valving principle in centuries; covers manual and solenoid valves.

It contains a simplified chart for pressure switch selection, which sheds new light on a subject shrouded in mystery.

It presents the only line of solenoid-pilot valves for air and low pressure liquid with a guarantee for longer solenoid and valve life.

Down to the handy pop-up tab, nothing has been overlooked in providing a more useful reference to the design engineer concerned with hydraulic components.

Use the coupon below to get your *free* copy of this valuable information, indispensible to modern hydraulic control.

BARKSDALE VALVES
5125 ALCOA AVE., LOS ANGELES 58, CALIF.

Please send a copy of the above described *Free* catalog 4G.

NAME _____ TITLE _____

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CITY _____ ZONE _____ STATE _____

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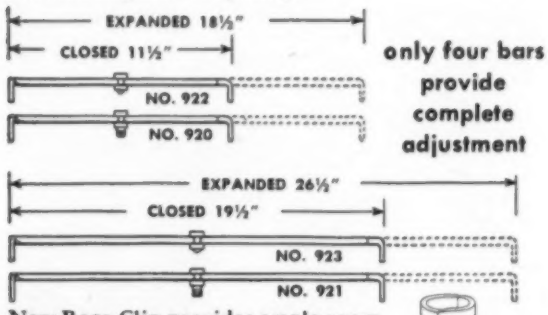
NOW! RACO OFFERS

the first adjustable bars that fill every requirement . . . pass every test!

STOCK JUST 4 BARS INSTEAD OF 16

Only 4 bars enable you to install any electrical switch or outlet box wherever you want it regardless of studding size or spacing.



only four bars provide complete adjustment

New Raco Clip provides ample room for device and added wiring space in all types of electrical boxes.

Write Today for Information on Raco Bar Hangers.

"A BOX FOR EVERY NEED"

ALL-STEEL EQUIPMENT INC., Aurora, Ill.

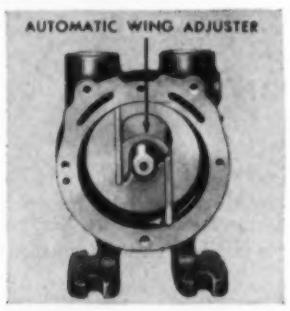
For more details circle NED-506 H4 on enclosed inquiry slip

When it has to Run for Years and Years
WITHOUT FAILURE

MAKE IT A LEIMAN VACUUM AND PRESSURE PUMP

Leiman users say this:
"Almost continuous operation, 24 hours a day for 21 years"
"Using Leiman pumps on 350 machines. No pump has given a moment's trouble"

4-WING TYPE. Vacuums to 20"; pressures to 15 lbs.; displacement to 162 cfm. Wings take up their own wear, insure positive pressure or vacuum.



2-WING TYPE. Vacuums to 29.9"; pressures to 25 lbs.; displacement to 40.8 cfm. Automatic wing adjuster forces steel blades to meet cylinder wall, no sticking.

Write for 16-page catalog and blueprints of typical applications on Leiman rotary positive pumps—choice of industry since 1889.

SEE OUR CATALOG IN SWEET'S FILE

LEIMAN BROS., INC.

167 Christie Street, Newark 5, N. J.

For more details circle NED-507 H4 on enclosed inquiry slip

BUILD YOUR OWN SPECIAL MACHINES

At Low Cost . . . to Meet High Production Schedules

for
DRILLING
TAPPING
CHAMFERING
REAMING
and similar operations

WITH BLACK PACKAGED UNITS

Self-contained—operate in any position. Easy to design into special purpose set-ups for single or sequential operations.

Black employs new principle—traversing motor shaft is work spindle. Torque applied uniformly with practically no end play. Air feed advances tool rapidly to work—hydraulic control gives uniform feed to end of work cycle. Tapping unit controlled so tap follows own lead. No chamfering first thread. No stripping on return stroke. Depth accuracy to within .001". Simple adjustments. Wide range of sizes and speeds. Step-drilling controls available.

Write for descriptive literature.

THE BLACK DRILL COMPANY, INC.
1380 East 222nd Street • Cleveland 17, Ohio

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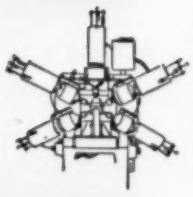
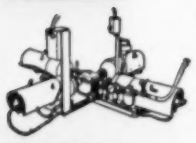
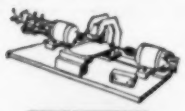


NO CLUTCHES





NO CAMS

NO REVOLVING WEIGHTS

NO GEARS

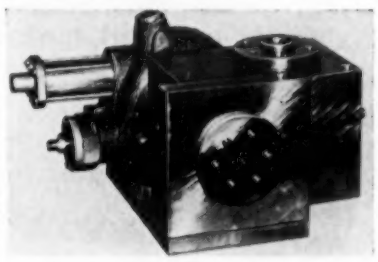
For more details circle NED-508 H4 on enclosed inquiry slip

NESTING PARTS BOXES
large size measures 36 x 14 x 16½-in.

Type 360 materials handling boxes fulfill demands for a container midway in size between tote boxes and corrugated bin-type containers and measure 36 x 14 x 16-in. Welded from 14-gage steel, they nest when empty and tier in rigid stacks when full, each unit resting securely on the upturned handles of the one below. Boxes are of accurately controlled weight to simplify batch weighing of small parts for inventory control. They can be used without shelving as small parts storage racks. Made by **Chas. Wm. Doepke Mfg. Co.,** 8884 Blue Ash Rd., Rossmoyne, O.

For more details circle NED-509 H4 on enclosed inquiry slip

INDEXING MECHANISM
indexes up to 500 positions



Multiple position speed indexing mechanism No. 477 for milling, drilling, assembly and other applications where a large number of positions are required will index up to 500 positions dependent upon gear ratio and index plate ordered. Self-contained shock control assures fast action regardless of work-piece weight. It can be adjusted to meet varying loads so that maximum speed can always be used. Device can be either air or hydraulically operated, and can be installed in any of four positions for convenient work location. Drive spindle is flanged for mounting work-holding fixtures. Made by **Erickson Tool Co.,** 2311 Hamilton Ave., Cleveland 14, O.

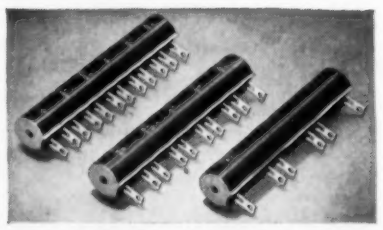
For more details circle NED-510 H4 on enclosed inquiry slip

HAND TRUCK GUARD
prevents accidents if truck slips

Accidents caused by a hand truck slipping from the operator's grasp can be prevented by equipping the two-wheel truck with the Swinguard. It forces the hand truck forward and away from the operator if he loses contact with the truck, thereby protecting his legs. Device is attached to any standard truck by heavy duty clamps. It also acts as a skid on the forward motion to keep the truck on a slight angle. Made by **Twin-Tilt Truck Co.,** Dept. NED, P. O. Box 11, St. Bernard, Cincinnati 17, O.

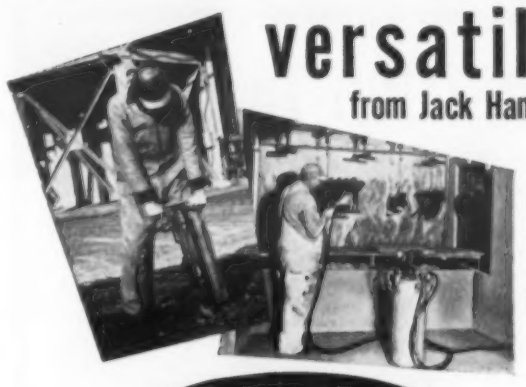
For more details circle NED-511 H4 on enclosed inquiry slip

ENCAPSULATED RESISTORS
in 2 to 6-unit group models



Recently announced Riteohm encapsulated resistors (*NED, July* '54) are now offered in grouped models made up of two to six individual lug-type units arranged end-to-end in one-piece molded resin body. Special resin also encloses individual resistor for protection against mechanical damage and ambient conditions. Grouped types are available in lengths up to 3 in. Individual resistor units can be in ¼, ½ and 1-w sizes and in resistance values up to 1,950,000 ohms. They consist of enameled alloy resistance wire noninductively pie-wound on rigid steatite bobbins. Terminals are welded. Offered by **Ohmite Mfg. Co.,** 3664 Howard St., Skokie, Ill.

For more details circle NED-512 H4 on enclosed inquiry slip



versatile - from Jack Hammer to Paint Spray

Quaker

VERSATILE HOSE

Here's a hose that can handle just about any heavy duty job you can mention. Its combination of exceptional light weight and high flexibility makes it ideal for air, gas, oil, water, paint . . . even mild acid solutions. Specially treated high tensile fibres give extra strength. Non-porous, oil and abrasion resistant for long wear. Economical, too . . . reduces stocks, storage space, remnant ends because Versatile alone will replace several old-style specialized hoses. For service and savings, use Versatile hose . . . another Quaker quality product for better production.

Write for free folder and name of nearest distributor.

QUAKER RUBBER CORPORATION
DIVISION OF H. K. PORTER COMPANY, INC.
OF PITTSBURGH
PHILADELPHIA 24, PA. • BRANCHES IN PRINCIPAL CITIES

For more details circle NED-513 H4 on enclosed inquiry slip

Think of it—in only 27" is packed the complete power unit for the "Walkie" type lift truck. *Other models are only 23¾" . . . That's space efficiency . . . plus!

If you have a material handling problem that requires minimum "operation area", ask about the "Walkie" MOTO-TRUC. Its application in close areas is making history every day . . . write for complete information on all the advantages of MOTO-TRUC.

Representatives in Principal Cities

The MOTO-TRUC Co.

MOTO-TRUC Designers for the Industry PATENTED

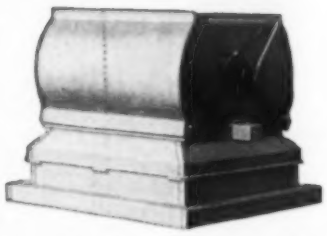
1961 E. 59th STREET • CLEVELAND 3, OHIO

PALLET . . . PLATFORM . . . HI-LIFT TRUCKS

LARGEST EXCLUSIVE MANUFACTURERS OF "WALKIES"

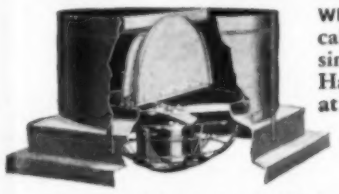
For more details circle NED-514 H4 on enclosed inquiry slip

Swartwout "Straight Through" Ventilators
provide efficient economical spot ventilation



For situations where fast powerful exhaust is desired, the *straight-through* type roof ventilator throws out unwanted elements in a hurry.

JECT-O-VALVE is completely enclosed when not in operation, and a solenoid-actuated lock holds top sections secure when closed. Made in 5 sizes, 28 capacities. Write for Bulletin J-B.



WHIRLOUT provides economical, effective ventilation with simple, sturdy construction. Half-disc dampers are pivoted at the center of its circular opening. 10 sizes, wide capacity selection. Write for Bulletin WH-C.

See our catalog in Sweet's Engineering or Architectural Files

18511 Euclid Avenue, Cleveland 12, Ohio
The Swartwout Co.
Roof Ventilators and Ventilating Louvers
POWER PLANT EQUIPMENT • PROCESS INDUSTRY CONTROLS

▲ For more details circle **NED-515 H4** on enclosed inquiry slip ▲

STACKPOLE Seal RINGS

Molded from carbon-graphite materials specifically balanced to match your specific requirements. All shapes and sizes. New oil seal grades that greatly minimize pitting and blistering. Send details of your application for recommendation by Stackpole engineers.

STACKPOLE

STACKPOLE CARBON COMPANY, *St. Marys, Pa.*

"EVERYTHING IN CARBON BUT DIAMONDS!"

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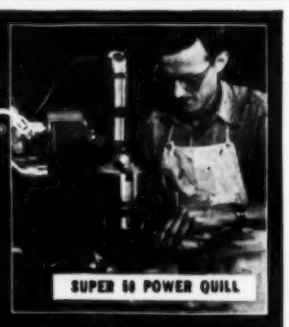
Precise LOWEST COST PRECISION FOR TOOL ROOM AND PRODUCTION



UP TO 45,000 R.P.M. AND ¼ H.P. ON AC/DC. Only PRECISE has the speed, power and precision needed to turn *Tungsten Carbide Mills* as well as all other rotary tools with shank diameters to ¼". Grind, mill, finish, polish any material from wood to the hardest alloy steel. MODELS SUPER 30 and SUPER 40 are for hand applications or machine set-ups; PRECISE SUPER 50 is for heavy duty in machine set-ups. Precision quills and chucks; lifetime-lubricated, micro-precision bearings; machined metal housings. Mounts and accessories for each model extend versatility on standard machine tools.

New

PRECISE SUPER 30 45,000 R.P.M. and ⅓ H.P. in 35 oz. Draw collet.

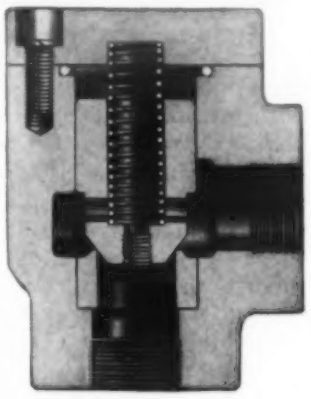
Write FOR CATALOG

PRECISE PRODUCTS CORP. 1346 Clark St., Racine, Wis.

▲ For more details circle **NED-517 H4** on enclosed inquiry slip ▲

HYDRAULIC CHECK VALVES
for service up to 3000 psi

High capacity is feature of line of hydraulic check valves for service up to 3000 psi. Valves are available in ¼ to 1½-in. sizes, the latter having 104.2 gpm capacity at 15 ft per second. Valves can be secured with pipe thread or valve connections and can be mounted in any position. Model 8640 is spring closed, 8642 is pilot operated and 8644, pilot operated with pressure breaker. Made by **Rivett Lathe & Grinder, Inc.,** Dept. NEP-2, Brighton 35, Boston, Mass.



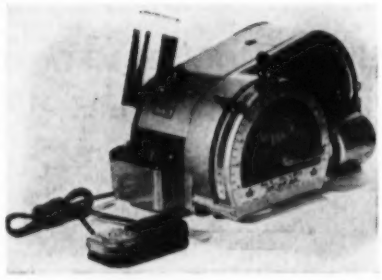
▲ For more details circle **NED-518 H4** on enclosed inquiry slip ▲

DOUBLE CLEVIS LINK
joins chain to rings, shackles, eyes

Making slings and hitches in the field with a pair of pliers or a screwdriver is possible when a double clevis link is used. Consisting of two clevises joined back to back and equipped with heat treated pins, it joins chain to rings, end links, shackles and eyes. Units are equipped with cotter and bearing pins and are made for ¼, 5/16, ⅜, 7/16 and ½-in. chain sizes. Made by **Thomas Laughlin Co.,** 111 Fore St., Portland 6, Me.

▲ For more details circle **NED-519 H4** on enclosed inquiry slip ▲

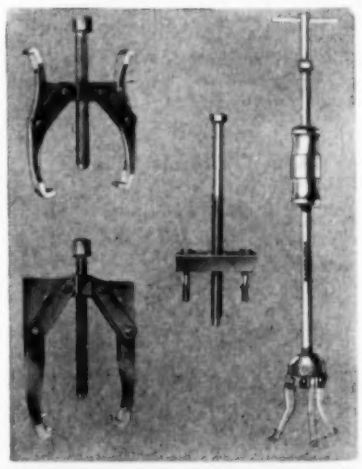
ELECTRIC TAPE DISPENSER
delivers two preset lengths



Cartons requiring two different lengths of tape are sealed readily with the National 88 electric Dual Length Tay-per. Any two preset lengths of tape from 6 to 70 in., can be delivered one at a time properly moistened by this tape dispenser. Two settings which are individually color-keyed to foot operating controls regulate the length to be moistened and dispensed. Machine is adjustable for all brands and types of tape from 1 to 4 in. wide and features an unbreakable plastic water bottle, heated tank for warm water moistening and self-sharpening steel knife. Made by **Nashua Corp.,** Package Sealing Div., 36 Franklin St., Nashua, N. H.

▲ For more details circle **NED-520 H4** on enclosed inquiry slip ▲

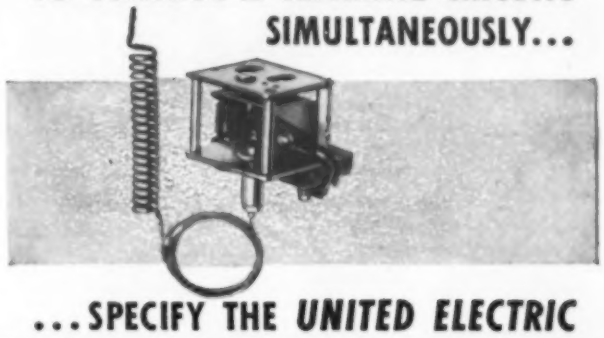
GEAR & WHEEL PULLERS
capacities range up to 50 tons



Two and three-arm gear and wheel pullers are capable of spreading to grip up to 36-in. diameters and have capacities up to 50 tons. Special "power-pitched" buttress thread permits high pulling force. Lips of pulling arms are reversible for inside or outside pulling applications. Basic parts are interchangeable between corresponding sizes of two and three-arm units. Where puller jaws can not be used, matched pulling attachments with thin, knife-like jaws can be forced behind bearings and gears to apply puller force. Sheave pulling attachments have thick lips that fit snugly into grooves to pull gears and wheels without damage. Made by **Blackhawk Mfg. Co.,** P. O. Box 613, Milwaukee 1, Wis.

▲ For more details circle **NED-521 H4** on enclosed inquiry slip ▲

TO CONTROL 2 SEPARATE CIRCUITS SIMULTANEOUSLY...



...SPECIFY THE *UNITED ELECTRIC* TYPE F43A DUAL SWITCH THERMOSTAT

This precision-built temperature control is available with a wide variety of thermal assemblies and switches for use between −150° F and +600° F. It is used to control two separate circuits simultaneously—as in air conditioning systems where a two stage compressor control is required. Especially suitable for installations in water baths, industrial ovens, hot plate presses, coffee roasters and heating equipment.

Switch Ratings: 15 amps at 115 or 230 volts A.C.—D.C. or 20 amp. A.C. switches available on specification. Write for bulletin #3-4.

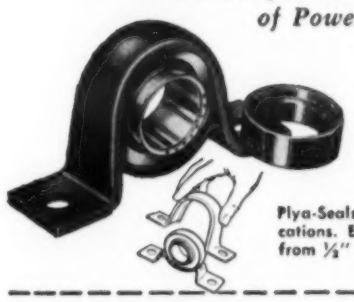
UNITED ELECTRIC CONTROLS COMPANY
81 School Street, Watertown, Mass.

STANDARD & SPECIAL THERMOSTATS & PRESSURE SWITCHES

▲ For more details circle **NED-522 H4** on enclosed inquiry slip ▲

Make cost-reducing improvements...

with the Fafnir Pressed Steel Line of Power Transmission Units

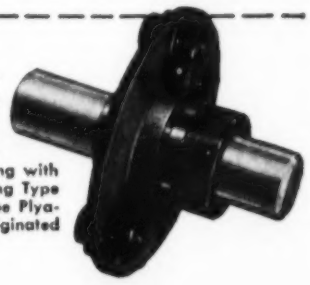


TYPE PB PILLOW BLOCK

A complete, low-cost unit including two-piece pressed steel housing plus Fafnir Wide Inner Ring Type Ball Bearing with Self-Locking Collar and Fafnir patented Plya-Seals. Designed for light-duty applications. Easy to install. For shaft sizes from ½" to 1¼".

THE FAFNIR FLANGETTE

Another inexpensive unit . . . for light duty applications. Over a million in use. It features pressed steel flange mountings of heavy gauge . . . a choice of either a Fafnir Wide Inner Ring Ball Bearing with Mechani-Seals or a Wide Inner Ring Type Bearing with patented, contact-type Plya-Seals. Both types have the Fafnir-originated Self-Locking Collar.



SEND FOR DESCRIPTIVE FOLDERS
The Fafnir Bearing Company
New Britain, Conn.

FAFNIR BALL BEARINGS

MOST COMPLETE LINE IN AMERICA

▲ For more details circle **NED-523 H4** on enclosed inquiry slip ▲

Where corrosion..temperature..pressure cause other valves to fail...

use **HOMESTEAD *Lever-Seald* PLUG VALVES**

THEY'RE "STICK-PROOF"
Operate Instantly . . Everytime . . Anytime

For more than 20 years, in practically every type of industry, HOMESTEAD LEVER-SEALDS have been giving trouble-free performance in services where extremes of temperature or pressure or corrosive line fluids cause ordinary valves to "stick" or "seize."

HOMESTEAD Lever-Seald PLUG VALVES are "Stick-Proof" because they're "Lever-Seald," which means that a powerful lever-and-screw device, built into every valve, assures positive action at all times under all conditions.

They operate fast, too—full open or closed by a quarter-turn; and because all operating parts are protected from line fluids, service conditions and weather, they last longer and cost less to maintain.

We make them in metals and alloys to suit your requirements in sizes 1½" to 12", for pressures from vacuum to 1500 lbs. and for temperatures ranging from 40° below zero to 1100° F.

WRITE TODAY for Valve Reference Book No. 39-3, No Obligation

HOMESTEAD VALVE MANUFACTURING CO.
"Serving Since 1892"

P. O. BOX 84 CORAOPOLIS, PA.

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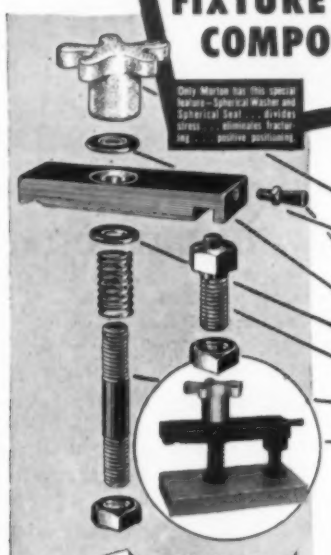
IMMEDIATE DELIVERY

Morton

FIXTURE CLAMPS AND COMPONENTS . . .



Only Morton has this special feature—Spherical Washer and Spherical Seat . . . divides stress . . . eliminates fracturing . . . positive positioning.

LARGEST ASSORTMENT IN THE INDUSTRY
- HAND KNOB
- SPHERICAL WASHER
- STEEL FINGER HANDLE
- CLAMP STRAP
- FLAT WASHER
- CLAMP REST
- SET-UP STUD
- COMPLETE ASSEMBLY

ECONOMIZE . . USE THEM AS STANDARDS. All precision made of heat treated selected steel, cadmium plated and corrosion resistant MID-NITE BLACK FINISH (A special MORTON process). Individual parts or complete assemblies. Any MORTON product can be adapted to whatever changes you might specify.

WRITE TODAY

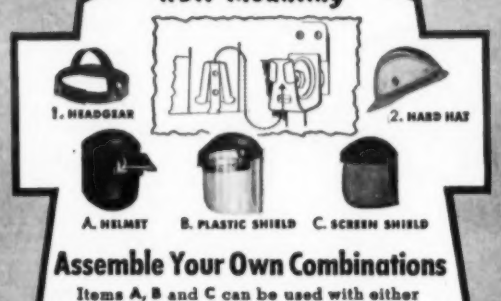
For our 72 page illustrated catalog. Contains full size tracing templates of each product, bound in loose leaf form for easy removal. SAVE TOOL AND DESIGN COSTS.

MORTON MACHINE WORKS
2421 Wolcott St., Detroit 20, Mich.

For more details circle NED-525 H4 on enclosed inquiry slip

CESCO RIGHT . . . before your Eyes!

NEW Mounting



Assemble Your Own Combinations

Items A, B and C can be used with either items 1 or 2 illustrated above so you can make six different combinations. The old-fashioned way you would buy a helmet and headgear, a shield and headgear, and so on until you had six combinations (twelve items) to do the same thing these five separate pieces will do.

Save buying extra parts . . . save money. On your next order specify CESCO interchangeable helmets and face shields.

They're—*"Right . . . before your Eyes."*

Send TODAY for CESCO literature

CHICAGO EYE SHIELD COMPANY • 2322 Warren Boulevard, Chicago 12, Illinois

CESCO FOR SAFETY

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For more details circle NED-526 H4 on enclosed inquiry slip

WE CARRY COMPLETE BAR STOCKS

- cold finished carbon
- hot rolled alloy
- cold finished alloy
- stainless

• All our warehouses carry a wide range of types, sizes and grades of steel bars. And you can always count on consistent high quality with the bars we carry. Why not simplify your buying by ordering *all* your bar stock from a single dependable source . . . U. S. Steel Supply?

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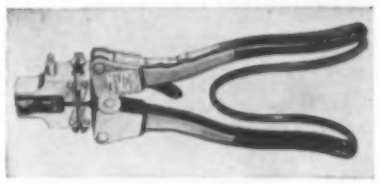
UNITED STATES STEEL

For more details circle NED-527 H4 on enclosed inquiry slip

COLD WELDING TOOLS for buttwelding nonferrous metals



Plier action KB-14 and KB-14B cold welding tools buttweld different sizes of same or dissimilar nonferrous metals together without heat, electricity or chemicals and can be operated by unskilled personnel. They weigh 5 lb and are 14-in. long. Welds produced are as strong as the material. In one test, 93 welds were made in 0.064-in. diameter hard deoxidized copper which was then drawn on high speed equipment to 0.014-in. without breaks. Model KB-14B handles aluminum and copper, and aluminum to copper wire in a range from 18 gage up to 14 gage. Model KB-14 handles copper wire from 14 gage up to 11 gage, and also aluminum to aluminum or copper wire from 14 gage to 8 gage. Made by **Utica Drop Forge & Tool Corp.**, 2500 Whitesboro St., Utica 4, N. Y.

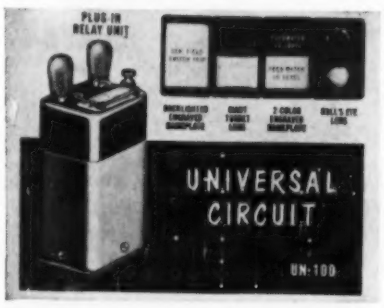
For more details circle NED-528 H4 on enclosed inquiry slip

WELDING ELECTRODE HOLDERS quickly disconnected from cable

Available in offset pug nose and in straight nose types, Quick - Disconnect welding electrode holders have a built - in vibration-proof cable connector which locks tightly to cables fitted with Cam-Lok female connector with one-third of a turn. Double cam design insures perfect contact and prevents wearing or moving of contact surfaces with resultant arcing and burning. Holder bodies are insulated with moisture-resistant glass fiber and have interchangeable jaw pads. Holders are designed for easy cleaning. Made by **Empire Products, Inc.**, Cam-Lok Div., Dept. E-23, P. O. Box 98, Cincinnati 36, O.

For more details circle NED-529 H4 on enclosed inquiry slip

SIGNALLING COMPONENTS plug-in units are widely adaptable



More than 100 signalling sequence operations can be handled by the Universal Tel - Alarm UN-100 Series Circuits, which utilize a single type of plug-in unit. The unitized relay assembly is a self-contained signalling component designed to accommodate either normally open or closed field trouble contacts and can be set in the field for continuous or interrupted service. All operating sequence variations or addition of lock-in features are accomplished by changes in terminal block connections or jumpers. Integral-mounted lights can be used to illuminate standardized annunciators for backlighted engraved nameplates, giant turret lenses, two-color split lenses and bullseye lenses. Made by **Tigerman Engineering Co.**, Dept. NE, 4332 N. Western Ave., Chicago 18, Ill.

For more details circle NED-530 H4 on enclosed inquiry slip

CAN CRUSHER discharges cans into containers

All cans up to full gallon size are automatically flattened to ⅝-in. height and discharged into crates or carts by the Burgee can crusher. It receives can into its throat between two conveying - crushing belts which, when they converge toward the discharge end, perform the crushing operation. Roughened belt links prevent slippage. Machine measures 6 x 3½ x 4 ft and uses a 3 hp, 220/440-v, 60-cycle, three-phase gearhead motor. Made by **F. H. Langsenkamp Co.**, 227½ E. South St., Indianapolis 4, Ind.

For more details circle NED-531 H4 on enclosed inquiry slip

FLOW STOPPAGE COSTS MONEY!

Have you ever figured how much flow stoppage costs you in:
- LOST STORAGE CAPACITY?
- LOST MAN-HOURS?
- LOST PRODUCTION TIME?

PneuBin will solve your flow stoppage problems and help reduce your operating expense. When materials hang-up in your bins and hoppers, PneuBin starts them flowing again. The PneuBin unit consists of a steel-backed neoprene panel, mounted on the inside wall of your bin. By the pneumatic inflation and deflation of the panel, the bin contents are displaced and disturbed to activation. After the diaphragm has collapsed, the air control unit (operating off the regular plant air supply) starts another cycle of inflation and deflation. The process continues automatically at whatever frequency is set on the air controller.

Because the neoprene panel is resistant to oils and most chemicals and is also thick and tough enough to withstand severe abrasive service, PneuBin is applicable to most any bin flow problem.

Send for "Flow Stoppage Report" and free literature. PneuBin engineers will gladly make recommendations, with no obligations on your part.

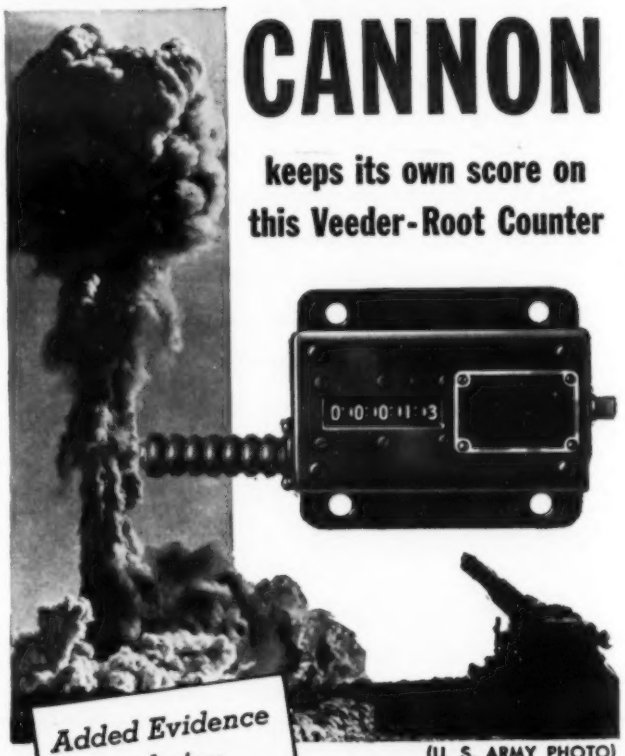
PneuBin is a product of

GEROTOR MAY CORP. • BALTIMORE 3, MD.

Manufacturers of GEROTOR HYDRAULIC PUMPS & MOTORS

For more details circle NED-532 H4 on enclosed inquiry slip

NEW ATOMIC CANNON



keeps its own score on this Veeder-Root Counter

Added Evidence that—

(U. S. ARMY PHOTO)

Everyone Can Count on VEEDER-ROOT

This mobile 280 mm. atomic cannon has *two* recoil motions. The primary recoil absorbs the cannon's "kick." The secondary recoil (something new in artillery) absorbs the forces created by the primary recoil. And each recoil motion is recorded by this special Veeder-Root Counter designed with a plunger-action shaft . . . which keeps the score on the cannon's use and indicates approaching need for maintenance.

This again points up the fact that "Anything Worth Making — or Worth Doing — *Is Worth Counting*." And Veeder-Root has the experience and resources *you* can count on, to give you any counter you need . . . for any mechanical or electrical application . . . in any field from Atomics to Automation. Write:

VEEDER-ROOT INCORPORATED
HARTFORD 2, CONNECTICUT

Chicago 6, Ill. • New York 19, N. Y. • Greenville, S. C.
Montreal 2, Canada • Dundee, Scotland
Offices and Agents in Principal Cities

'The Name that Counts'

For more details circle NED-533 H4 on enclosed inquiry slip

ANOTHER NEW GAGE BY FEDERAL

THIS ADJUSTABLE I.D. GROOVE GAGE measures the diameter of a wide range of internal grooves between .725" and 2.625" diameter. Its arms enter bores with diameters down to .500" and the contacts can check grooves even at the bottom of blind holes. Since the fixed contact is on lower arm, neither the weight of the gage nor pressure from the operator's hand affects the reading. Write FEDERAL PRODUCTS CORP. 4178 EDDY ST., PROVIDENCE 1, R. I.

Upper diagram: Sensitive contact retracted to enter bore.
Lower diagram: Sensitive contact, released, centers itself at maximum diameter of groove.

Ask FEDERAL FOR ANYTHING IN MODERN GAGES...

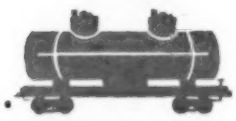
Dial Indicating, Air, Electric, or Electronic — for Inspecting, Measuring, Sorting or Automatically Controlling Dimensions on Machines

For more details circle NED-534 H4 on enclosed inquiry slip

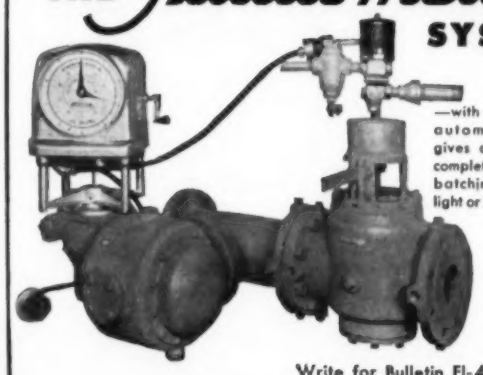
Whether Your Liquid Measuring Problem Involves Gallons . . . .

or Barrels

or Tank Cars . . . .



THE Fluidometer SYSTEM



—with its exclusive automatic reset, gives accurate and completely automatic batching of either light or heavy liquids.

Write for Bulletin FI-49

HETHERINGTON & BERNER INC.
719 Kentucky Avenue • Indianapolis 7, Indiana

For more details circle NED-535 H4 on enclosed inquiry slip

Remove heat exchanger and condenser tubes quickly, easily with

AIRETOOL TUBE REMOVAL TOOLS

Tube Wall Reducing Tool

Made from the highest quality tool steel—quickly reduces tube wall to a thin shell from the inside. Operates at low speeds . . . easily controlled. For ½" to 1" O.D. tubes; No. 2 or 3 Morse taper shank.

Tube Drift . . . Collapsing Tool

Made from best quality heat treated steel machined to precision standards, these tools quickly and efficiently remove tube stubs from condenser or heat exchanger tube sheets. Shanks are standard .680" x 2⅜". Special shanks to order. For tubes ½" to 1½" O.D.

For full details on Airetool Tube Removal Tools, write to:

AIRETOOL MANUFACTURING COMPANY
SPRINGFIELD, OHIO

Representatives in principal cities of U.S.A., Canada, Mexico, South America, England

BRANCH OFFICES: New York, Chicago, Philadelphia, Houston, Tulsa, Baton Rouge

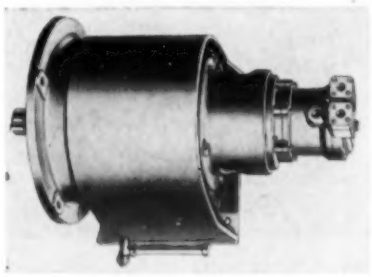
For more details circle NED-536 H4 on enclosed inquiry slip

COOLANT FEED MANIFOLD for multiple drilling operations

Easily mounted on most standard four or eight - spindle drill heads, this coolant feed manifold directs coolant to the points of the drills where it does the most good. Split ring design makes it unnecessary to remove the drill head for installation. Eight removable and adjustable nozzles are supplied, but up to 16 nozzles can be accommodated if desired. As the drill head moves up the nozzles move out of the way and coolant stops flowing. Flow begins automatically when the head comes down. Nozzles are made of standard copper tubing to simplify replacement. Made by **Graymills Corp.**, Dept. C, 3717 N. Lincoln Ave., Chicago 13, Ill.

For more details circle NED-537 H4 on enclosed inquiry slip

HYDRAULIC MOTOR & REDUCER speeds range from 1.7 to 1170 rpm, torques from 42 to 41,500 lb-in.



Oilgear type H fluid power axial piston motors in 1, 3, 8, 12 and 20-hp sizes are flange and resilient-coupling connected to Falk single, double, triple and quadruple reducers to form integral, compact variable speed drives called Oilgearducers. Ratio combinations provide output speeds from 1.7 to 1170 rpm. Continuous-operation output torques, based on 1100-psi pressure, range from 42 to 41,500 lb-in. Starting and peak torques for intermittent service can be 60 per cent higher.

When powered by variable delivery pumps, units provide accurate speed regulation, infinite speed range, cushioned and controlled acceleration and deceleration, quick reversal, constant torque, hydrodynamic braking, safe operation in hazardous locations and automatic overload protection.

Similar concentric units with oil-tight shaft seals for vertical wall mounting and with round face flanges for floor mounting are also available for vertical shaft applications. Oilgearducers with single or double right angle output shafts are also available in ratios from 5:1 to 1500:1. Made by **Oilgear Co.**, 1561C W. Pierce St., Milwaukee 4, Wis.

For more details circle NED-538 H4 on enclosed inquiry slip

ELASTICONE® GUIDE PIN COVERS

CUT DIE COSTS 25%

Low-costing Elasticone Guide Pin Covers reduce die breakage; protect man & machine — closes the gap between pins and bushings.

Just snaps into place—no installation costs. Manufactured in stock sizes.

Write for full information and literature.

CENTRAL

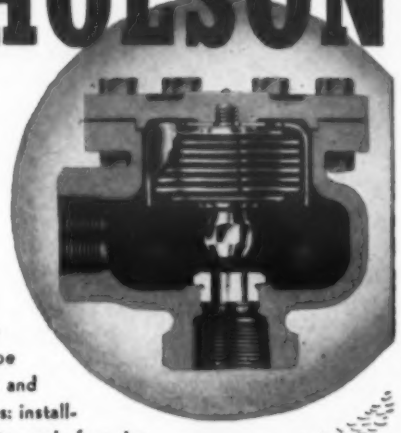
2208 EAST HUNTINGDON ST. PHILA. 25, PA.

CENTRAL SAFETY EQUIPMENT COMPANY

For more details circle NED-539 H4 on enclosed inquiry slip

NICHOLSON

TRAPS for Every Plant Application



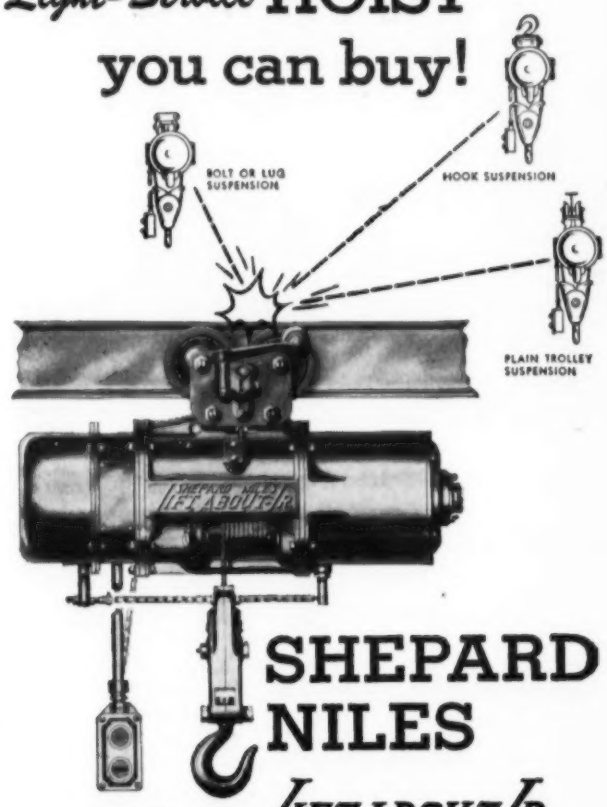
Send for Nicholson Catalog 953. This 32-page standard reference on advance-type trapping of steam, air and other mediums contains: installation diagrams, charts and formulae for determining proper trap sizes, and advice on solving specific problems. See why leading plants are increasingly standardizing on Nicholson traps for increased production and minimum maintenance.

Send for Helpful Booklet

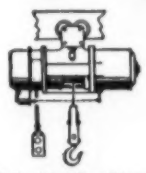
W. H. NICHOLSON & CO.
TRAPS · VALVES · FLOATS
162 Oregon St., Wilkes-Barre, Pa.

For more details circle NED-540 H4 on enclosed inquiry slip

TOUGHEST *Light-Service* HOIST you can buy!

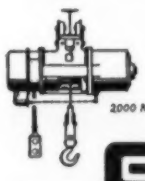


SHEPARD NILES *LIFT ABOUT-JR.*



500 T Parallel or Cross Mounted.

1000 J Parallel or Cross Mounted.



2000 M Parallel or Cross Mounted

Hook your load to a Lift About-Jr.—it's the toughest light-service hoist you can buy. This rugged Shepard Niles Hoist is ideal for a hundred-and-one lifting jobs, guarantees you years of dependable service. It offers trouble-free wire rope hoisting, either rope or push-button operation.

Let a Shepard Niles representative tell you about the complete Lift About-Jr. line. He'll help you select the hoist with the right capacity and controls for your job.

SHEPARD NILES CRANE AND HOIST CORPORATION

MAIL COUPON

SHEPARD NILES Crane and Hoist Corporation
1845 Schuyler Ave., Montour Falls, N.Y.

( ) *Please send me new Lift About-Jr. Bulletin.*
( ) *Please have a representative call.*

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

For more details circle NED-541 H4 on enclosed inquiry slip

● Blast cleaning counter claims fly thick and fast. Here's a simple straightforward statement: "We will guarantee your cleaning costs per unit of work blast cleaned will be at least 15% lower *regardless* of the price you are now paying for chilled iron abrasives!"

Controlled T shot and grit can make this statement—and back it up—because: it deforms before shattering and therefore lasts longer; it does a cutting job without wearing out your blast cleaning equipment, because its BHN is *controlled!*

Write the nearest Hickman, Williams office for proof and a complimentary copy of "A Primer on the use of shot and grit."

National Controlled "T" Shot and Grit is Produced Exclusively by

THE NATIONAL METAL ABRASIVE CO. • Cleveland, Ohio
WESTERN METAL ABRASIVES CO. • Chicago Heights, Illinois
AND SOLD EXCLUSIVELY BY
HICKMAN, WILLIAMS & CO.
(INCORPORATED)
CHICAGO • DETROIT • CINCINNATI • ST. LOUIS • NEW YORK
CLEVELAND • PHILADELPHIA • PITTSBURGH • INDIANAPOLIS

▲ For more details circle **NED-542 H4** on enclosed inquiry slip ▲

Grating by BLAW-KNOX

what can steel grating do for you?

You naturally think of steel grating for floors, platforms, walkways, catwalks and stair treads.

But have you ever thought of how steel grating can make your danger spots safe . . . by covering an unprotected open pit or light well, by guarding a fan, by providing some sturdy shelving, or by serving some purpose you'd never thought of before. Look around your plant, both inside and outside, to see where you can use versatile steel grating . . . to make your plant an even better, safer place to work.

If you come across some tough problem on a grating application, we'll be glad to offer our suggestions.

Only Blaw-Knox Electroforged® Steel Grating and Stair Treads —have these five exclusive features:

1. rigid one-piece construction —easy to install
2. all surfaces accessible —easy to paint
3. no sharp corners to clog —self-cleaning
4. maximum open area —for light and ventilation
5. non-slip twisted crossbar —safe footing

A short note will bring you a copy of new Bulletin No. 2365-R —a dimensional sketch will bring you a quotation.

BLAW-KNOX

BLAW-KNOX COMPANY
2068 Farmers Bank Building
Pittsburgh 22, Pennsylvania

BLAW-KNOX EQUIPMENT DIVISION GRATING DEPARTMENT

GRATING APPLICATIONS: floors • platforms • walkways • catwalks • stair treads • fan guards • shelving • and many other uses, both outdoors and indoors, for versatile steel grating

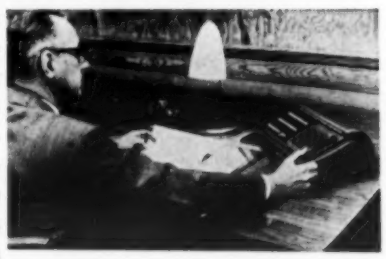
▲ For more details circle **NED-543 H4** on enclosed inquiry slip ▲

TORQUE LIMITER COUPLING provides overload protection

Wide variety of machinery drives with direct-connected shafts can be given overload protection by this adjustable torque limiter-coupling. Compact unit can be adapted to motor drives with torque loads up to 260 lb-ft which include a direct coupled motor or motor and speed reducer combination. When machine drive overload conditions cause the torque setting to be exceeded, the torque limiter slips at from one-third to one-half the torque setting. Drive is rendered inoperative until motor is shut off and the overload condition corrected. Coupling is 6 in. OD and 5½ in. long with maximum torque capacities of 130-lb-ft and 260 lb-ft. Standard bore sizes are 1, 1⅛, 1¼, 1⅜ and 1½ in. Made by **Morse Chain Co.**, Dept. ND, 7601 Central Ave., Detroit 10, Mich.

▲ For more details circle **NED-544 H4** on enclosed inquiry slip ▲

INTERCOMMUNICATION SYSTEM features executive priority to make necessary interruptions



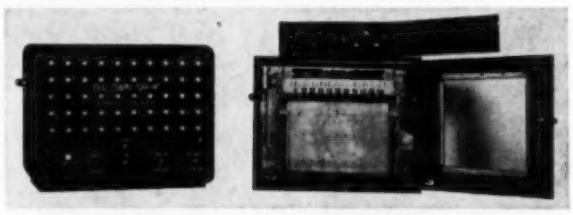
When the executive requires immediate communication with an employee through the Flexifone intercommunicating system, he need only press a priority button which will suspend busy connections at any station desired. He can override other conversations at his discretion, but cannot listen in. Release of the key automatically reconnects the interrupted lines. A warning sign flashes on desk instruments of interrupted parties.

Units are compact, a large master station with 24 keys being housed in a desk unit only 5⅜ in. high. Power unit is in small terminal box under desk or affixed to baseboard. Night operation of system between certain stations can be set up through prearranged connections at any master station. Made by **DuKane Corp.**, Commercial Sound Div., Dept. NED, St. Charles, Ill.

▲ For more details circle **NED-545 H4** on enclosed inquiry slip ▲

STRAIN GAGE RECORDER for use with up to 50 gages

Records from SR-4 strain gages at 50 points can be taken continuously and automatically in a total of 30 to 90 seconds by Baldwin strain scanning and re-



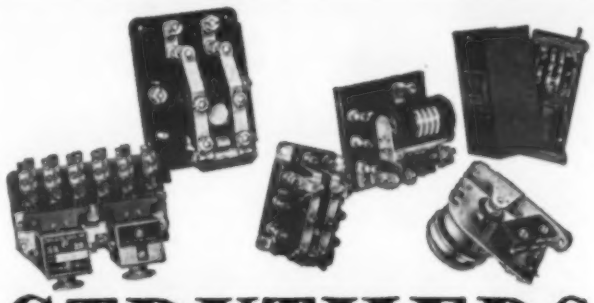
cording instruments. Recorder provides three ranges of measurement: 0-2000, 0-5000 and 0-10,000 microinches. It handles gages with mixed resistances from 60 to 500 ohms. Gage factor control accommodates strain gages with gage factors from 1.7 to 2.25. Scanner unit contains electrical circuits and controls for switching, including two additional check position channels for setting and checking the scanning recorder zeros. System can also be manually advanced through each of the 50 channels. Announced by **Baldwin-Lima-Hamilton Corp.**, Dept. T. E., Philadelphia 42, Pa.

▲ For more details circle **NED-546 H4** on enclosed inquiry slip ▲

CORRECTION

In the description of the Hydra-Seal quick-disconnect hose coupling (*NED-726 F4, June* 1954), the sizes were given incorrectly. These couplings, which self-seal on break-away, for air, hydraulic and fluid handling lines are available in ⅜ and ½-in. standard pipe thread sizes. A complete range from ⅛ to 1-in. will be available. Couplings are made by **Char-Lynn Co.**, Dept. NED, 2855 26th Ave. S., Minneapolis 16, Minn.

▲ For more details circle **NED-547 H4** on enclosed inquiry slip ▲



STRUTHERS-DUNN

Standard relays and timers match 4 out of 5 requirements

5,348 RELAY TYPES

S-D

STRUTHERS-DUNN, INC., Lamb's Road, Pitman, N. J.

BALTIMORE • BOSTON • BUFFALO • CHARLOTTE • CHICAGO • CINCINNATI
CLEVELAND • DALLAS • DETROIT • KANSAS CITY • LOS ANGELES
MINNEAPOLIS • MONTREAL • NEW ORLEANS • NEW YORK • PITTSBURGH
ST. LOUIS • SAN FRANCISCO • SEATTLE • SYRACUSE • TORONTO

▲ For more details circle **NED-548 H4** on enclosed inquiry slip ▲

SHARP or FUZZY?

What kind of prints are YOU getting from your drawings? If they're not sharp and clear . . . if they're confused by the ghost of erasures . . . then it's high time to specify . . .

GHOST-PROOF

ELLCO-VEL®
TRACING PAPER

Erase as often as you wish, re-draw again and again . . . there's never a hint of a ghost in prints. Crumple it, handle it, treat it rough . . . ELLCO-VEL will out-perform your present paper in delivering legible prints. Just one trial will sell you on this 100% rag vellum, with the eye-resting blue tint!

FREE SAMPLE KIT!

Give ELLCO-VEL your own drawing board test. Write today for FREE sample kit!

B. K. ELLIOTT CO.
PITTSBURGH • DETROIT • CLEVELAND

WRITE DEPT. 51E • 126 SIXTH ST. • PITTSBURGH 22, PA.

▲ For more details circle **NED-549 H4** on enclosed inquiry slip ▲

NEW!

Rapistan®

SEALED CASTER

at ⅓ less cost than ordinary non-sealed casters!

5200 Series Rapistan Sealed Caster with 6" Sealed MB Demountable Wheel.

Now, for the first time, this revolutionary Rapistan development gives you a heavy-duty cold-forged *sealed* caster at *⅓ less cost than ordinary leading non-sealed casters!* Save in longer caster life, improved performance, lower maintenance. Dirt, acids, alkalis, brines, other chemicals are *sealed out* of coin-hardened raceways. Ask your Rapistan distributor to show you the comparative service chart, or write direct.

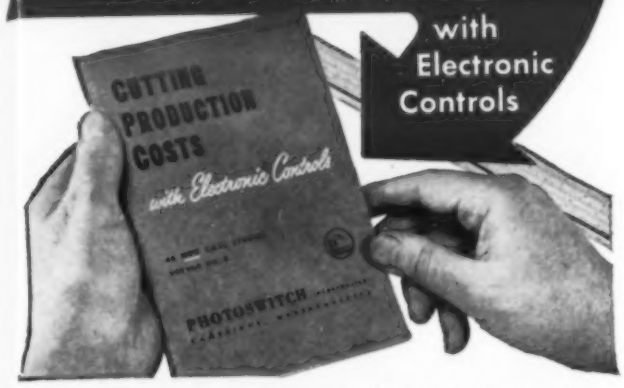
YOURS FREE! *Write for handbook describing Rapistan casters including new 5200 Series.*

The RAPIDS-STANDARD COMPANY, Inc.
283 Rapistan Building • Grand Rapids 2, Michigan

Rapistan® FASTEST GROWING NAME IN CASTERS

▲ For more details circle **NED-550 H4** on enclosed inquiry slip ▲

46 tested ways to SAVE MONEY with Electronic Controls



A completely revised edition of the handbook that has become the "bible" of electronic control for thousands of engineers and production executives.

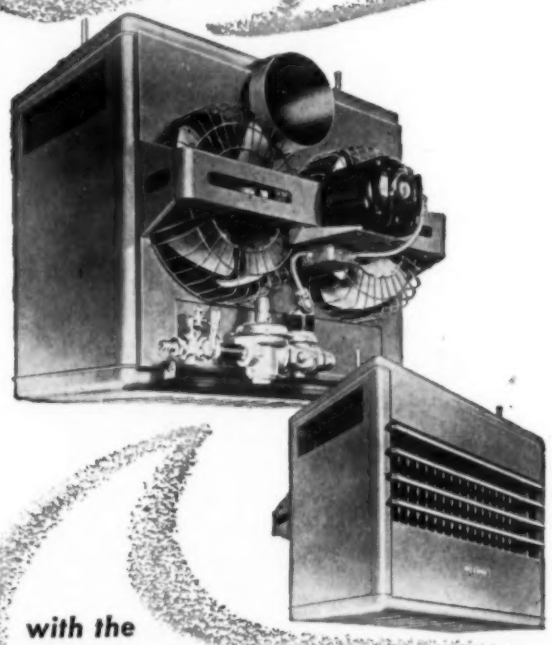
Newly edited, with 46 new case studies showing how standard packaged electronic controls have solved many industrial problems you're likely to meet. It explains clearly and factually, without hocus-pocus, tested ideas for achieving new efficiency through "Electron-eered" counting, weighing, measuring, timing and cycling.

Send for your FREE copy now!

Photoswitch Incorporated
Dept PB-8, 77 Broadway, Cambridge 42, Mass.

▲ For more details circle NED-551 H4 on enclosed inquiry slip ▲

NEW Reznor's 250,000 BTU Gas Unit Heater



with the **Exclusive Twin-Fan Design**

Now there's more proof of Reznor engineering leadership—a new 250,000 BTU twin-fan heater. The first of its size to be offered by any nationally-recognized unit heater manufacturer. The first of any size to feature twin-fan design.

The two fans, operating from a single heavy-duty ¼ HP motor, provide more effective air distribution at a much lower noise level than is possible with a single larger fan. The new unit moves 3200 CFM with an air throw of 90 feet.

Tremendous capacity and power—but still so compact you can fit it into almost any out-of-the-way spot. Height of the US250-F is only 33½", the same as on Reznor's 175,000 BTU unit. The new 250,000 BTU heater is 36" wide and 40 3/16" deep overall; cabinet depth is 24⅝".

For more details on this revolutionary new unit, write today for your copy of spec sheet NPS-5401A. For the whole story on the complete Reznor line see the Reznor catalog in Sweet's Plant Engineering and Industrial Construction Files.

The Reznor Manufacturing Company
41 Union Street, Mercer, Pennsylvania

REZNOR
THE WORLD'S LARGEST-SELLING GAS UNIT HEATERS

▲ For more details circle NED-552 H4 on enclosed inquiry slip ▲

PRECISION SWITCH
operates over —50 to 1000° F range

Precision and compactness are built into the IHTI panel mounted switch, which is suitable for aircraft and other critical applications. It operates dependably over a temperature range from −50 to 1000° F. Switch requires an operating force from 10 to 20 oz. Pretravel is 0.065-in. maximum, differential travel 0.010-in. maximum and overtravel 0.125-in. Hexagonal and lock nuts permit adjustment of operating point without removing switch from its mounting. Made by **Minneapolis-Honeywell Regulator Co.,** Micro Switch Div., 205 S. Chicago Ave., Freeport, Ill.

▲ For more details circle NED-553 H4 on enclosed inquiry slip ▲

TRACTOR-SHOVEL
features torque-converter drive

Model HRC torque-converter driven Payloader tractor-shovel is available with either gasoline or diesel engine and has a 1⅓-yd payload. Heavy-duty full-reversing transmission provides four speed ranges in either direction and drives through all four wheels. Torque converter minimizes amount of shifting required and cushions power train from shock. Power steering results in ease of handling and maneuverability. Hydraulically-operated bucket automatically positions itself for digging. Made by **Frank G. Hough Co.,** 746 Seventh St., Libertyville, Ill.

▲ For more details circle NED-554 H4 on enclosed inquiry slip ▲

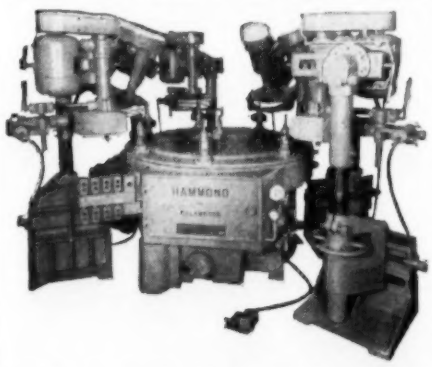
MICROMETER COMPARATOR
measures in millionths of an inch

Electronic model 2 micrometer comparator provides precision measurement in millionths of an inch by resolving differences in capacitance without physical contact with the work. Instrument is self contained and generates 1 microamp per microinch. A similar principle is used in another instrument for precise measurement of pressure differentials. Made by **Decker Aviation Corp.,** 1361 Frankford Ave., Philadelphia 25, Pa.

▲ For more details circle NED-555 H4 on enclosed inquiry slip ▲

AUTOMATIC POLISHING MACHINE
has seven indexing work spindles

Model K-62-7 rotary automatic indexing polishing and buffing machine will accommodate up to six head and stand machining stations and has seven work spindles, one being used for loading and unloading. Indexing turret measures 62 in. OD and 42 in. high from floor to top of spindles. Dwell period is adjustable, and table is locked at each index position. Table work spindles are driven by a ¾-hp motor, operate independently of the indexing mechanism, and are variable in speed from 15 to 45 or 50 to 150 rpm. A spring-tensioned brake automatically stops the spindle at the operator station to facilitate loading. Made by **Hammond Machinery Builders, Inc.,** 1623 Douglas Ave., Kalamazoo 54F, Mich.



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2000...6000 PSI HYDRAULIC PRESSURE From Your Shop Air Line

With this WATSON-STILLMAN Double Acting Air Engine Pump

A compact, lightweight hydraulic pump for many applications:
- For Hydrostatic testing
- As a pumping unit for all types of hydraulic service
- To operate hydraulic jacks or machinery
- To fit your special hydraulic applications

Simply connect the pump to your shop air line or field compressor. Operates on pressures from 50 to 150 psi.

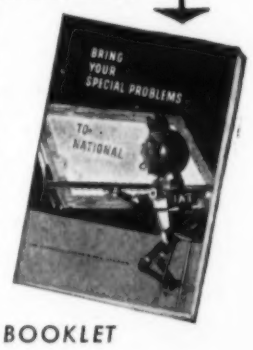
Write today for Bulletin A-5

WATSON-STILLMAN FITTINGS DIVISION
H. K. PORTER COMPANY, INC.
Roselle, New Jersey
2-A

▲ For more details circle NED-557 H4 on enclosed inquiry slip ▲

See how "National" can help you solve "SPECIAL" fastener problems

In many cases involving "special" fasteners or small parts, National's "Special Products Service" has planned a method of manufacture by cold heading that has solved the problem . . . with economy and volume production. Just a few of the many "specials" produced at National are included in this factual 16-page booklet. Send for your free copy today and see how National's wide range of cold heading equipment and specialized know-how can help you solve a limitless variety of "special" fastener problems.



FREE BOOKLET

THE NATIONAL SCREW & MFG. CO.
2440 East 75th St.,
Cleveland 4, Ohio

▲ For more details circle NED-558 H4 on enclosed inquiry slip ▲

SAVE 50% and more in Labor-Material with FencPainteR

For WOOD - METAL BRICK - STONE CONCRETE

Hundreds of industries and institutions all over America are using the FencPainteR applicator system of painting at immense savings. It's five times faster than brushing methods. Irregular and corrugated surfaces painted with the same facility and covering power as smooth surfaces. One concern painted 6 ft. wire fence at a total cost of only 20c per lin. ft. FencPainteR enamels contain only top-notch ingredients — go much farther — are more economical in the long run.

SPECIAL TRIAL OFFER — Including industrial size FencPainteR and 5 gal. FencPainteR aluminum enamel, 1 gal. solvent. Complete, only **$57.00.** Enough to do 300 lin. ft. of 6 ft. chain link fence. (Add $5.00 for gray, white or black — $10.00 for red or green).

THE ONLY ROLLER MADE WITH CAPILLARY ATTRACTION (PAINT HOLDING POWER)

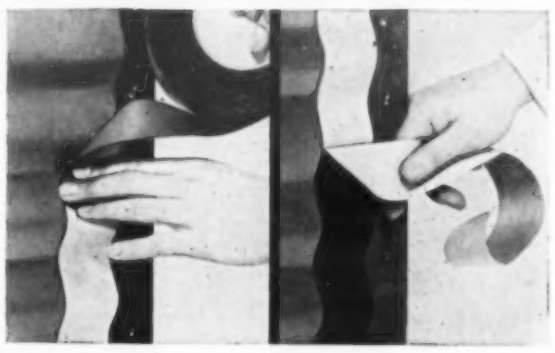
FencPainteR Corporation
2314 W. Van Buren Street Dept. NE Chicago 12, Ill.

MAIL COUPON for new 32 page illustrated brochure with full details covering FencPainteR products and their use.

FencPainteR Corp., 2314 W. Van Buren St., Dept NE Chicago 12, Ill.
☐ Please rush Free 32 page Brochure
☐ Send Special Trial Offer, complete
(Color desired.....) $.....
Name .....
Address .....
City ..... State .....

▲ For more details circle NED-559 H4 on enclosed inquiry slip ▲

NEW watertight seal!



for metal edges, corners, surfaces

Here's a new 3M product that can provide a watertight seal wherever two pieces of metal meet. It's EC-1202, made of synthetic rubber ribbon, reinforced with sturdy fabric for extra strength. It's easy to apply, too. Widths range from ¼" to 2" in ¼" increments. Available in rolls of 100' (1/16" thick) and 200' (1/32" thick).

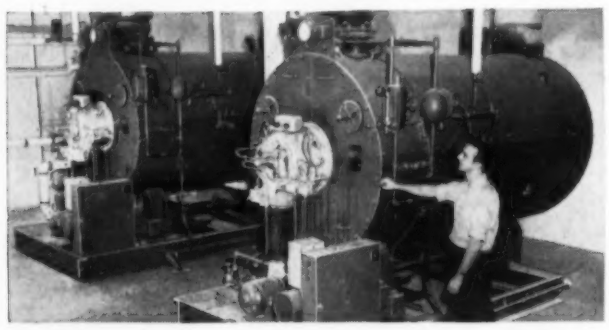
For details, write 3M, Dept. 88, 417 Piquette Ave., Detroit 2, Michigan.

3M COMPANY — MINNESOTA MINING AND MANUFACTURING COMPANY ADHESIVES AND COATINGS DIVISION

see our catalog in PRODUCT DESIGN FILE or write for copy

For more details circle NED-560 H4 on enclosed inquiry slip

Steam Costs Go DOWN where *Powermasters* Go In



For Example:

An Eastern electric utility installed these two *Powermaster* Packaged Automatic Boilers for steam heating the warehouse and garage areas in a new, modern headquarters building. A *Powermaster* is also supplying heating steam at one of the company's generating stations. These *Powermasters* combine the advantages of space-saving compactness, cost-saving installation, smokeless combustion, completely automatic operating and safety controls, high fuel economy at all loads, less attention, maintenance-saving accessibility, dependability and a hospital-clean boiler room.

Have You Checked Your Steam Costs Lately?

Many kinds of industrial plants, food processors, schools, institutions, public buildings, laundries, housing projects and utilities are also enjoying the cost-saving advantages of *Powermaster* boilers.

Send now for NEW Bulletin describing and illustrating the many cost-saving advantages of *Powermaster* units.

O&S *Powermaster*®

PACKAGED AUTOMATIC BOILERS

Sizes to 500 HP; pressures to 250 psi.

Orr & Sembower, Inc.
Morgantown Road, Reading, Pa.

For more details circle NED-561 H4 on enclosed inquiry slip

COAXIAL CABLE STRIPPER
cutting blades are adjustable

Model 400 of the coaxial cable stripping and cutting tool will handle RG8U, RG11U and smaller sizes of cables, while small model 300 will strip RG59U and still smaller cable sizes. The cable is inserted in the hole, handles are squeezed shut against stops and tool is rotated 180 degrees. Three such twists prepare cable for the connector. Cutting blades are adjustable for various sizes of cable. Model 400 is priced at $38.50 and model 300 at $33.50. Extra blade sets are $3.00. Made by **K. Miller Tool & Mfg. Co.**, 8½ Cass St., Springfield 4, Mass.

For more details circle NED-562 H4 on enclosed inquiry slip

COLD WASHING DEGREASER
compressed air creates turbulence

Heavy deposits of oil, dirt, grease and chips are removed from all types of metal parts by the model 50 Super Cleanmaster, an automatic cold washing degreaser. Turbulence created by compressed air and penetrating chemical properties of the cleaning compound provide the cleaning action. An electric pump continuously filters out dirt, chips and abrasives. Caster-mounted portable machine has full length air-agitated soaking tank, hinged work shelves, parts basket, drying shelf and compressed air gun. Made by **Kleer-Flo Co.**, Dept. H, 250 W. 57th St., New York 19, N. Y.

For more details circle NED-563 H4 on enclosed inquiry slip

SAFETY MASK-HOOD
aluminized for heat deflection

Maximum safety with wearing comfort is provided by this SF524AT hood-type mask which has fiber frame with adjustable headgear. Mask is made of tropic weight asbestos cloth, aluminized for maximum heat deflection. Oversize plastic vision area provides maximum visibility. Ventilating screen in rear, also oversize, is of stainless steel wire. Made by **Safety First Supply Co.**, 423 Magee St., Pittsburgh 19, Pa.

For more details circle NED-564 H4 on enclosed inquiry slip

TOTE PAN DUMPER
lifts up to 11 ft before emptying

Small parts, fasteners, granular and other products weighing up to 500 lb per pan can be dumped with this tote pan dumper. It elevates loaded tote pans any desired height up to 11 ft above floor level, inverts the pan to empty the contents and then returns the pan to loading level. It can be used for feeding overhead hoppers and conveying systems. Rollers on the carrying platform permit easy loading and unloading of tote pans. A ¾-hp electric motor powers the hydraulic hoist. Dumper measures 30 in. wide, 48 in. long and 12 ft high. Made by **Allied Sales & Mfg. Co.**, 3101 W. Grand Ave., Chicago 22, Ill.

For more details circle NED-565 H4 on enclosed inquiry slip

Hamilton Industrial Trucks

Whatever your requirements . . . there's a Hamilton truck just right for your job! Ranging in load capacity up to 12,000 lbs., Hamilton trucks are available in hundreds of styles and sizes—platform trucks, box trucks, stake trucks, shelf trucks, 2-wheel hand trucks, wagon trucks, lift truck systems, dollies, barrel skids and many others. Special trucks of wood or steel are also designed and built by Hamilton to meet particular requirements. Look into Hamilton trucks before you buy! Be sure you get the right truck for your job! It can lower your costs substantially!

WRITE FOR THE Hamilton Catalog TODAY!

The Hamilton Caster & Mfg. Company
1659 DIXIE HIGHWAY, HAMILTON, OHIO

For more details circle NED-566 H4 on enclosed inquiry slip

THE INSIDE STORY OF

EX-CELL-O DRILL JIG BUSHINGS

Here are a few good reasons why Ex-Cell-O Drill Jig Bushings last longer and perform better:

1. **High carbon chrome bearing steel is selected for maximum wear and deep-hardened to 62-64 Rockwell "C" in automatic equipment.**
2. **Every bushing must measure up to Ex-Cell-O precision standards, as well as to A.S.A standards.**
3. **High finish is ground on inside and outside diameters, and *under the head* for perfect bearing.**

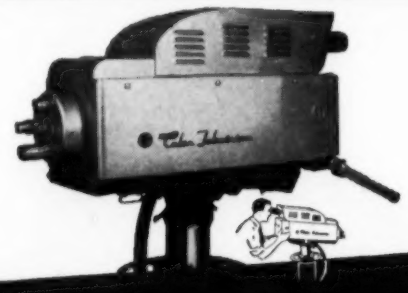
To satisfy the needs of your purchasing and engineering departments ask for an adequate supply of Ex-Cell-O Bushing Catalogs.

EX-CELL-O CORPORATION
DETROIT 32, MICHIGAN

MANUFACTURERS OF PRECISION MACHINE TOOLS • GRINDING SPINDLES • CUTTING TOOLS • RAILROAD PINS AND BUSHINGS • DRILL JIG BUSHINGS • AIRCRAFT AND MISCELLANEOUS PRODUCTION PARTS • DAIRY EQUIPMENT

54-37 XLO

For more details circle NED-567 H4 on enclosed inquiry slip



applications unlimited!

RCA NEW COLOR TELEVISION CAMERA gives Camloc fasteners another chance to prove their versatility

Camloc quarter-turn fasteners belong wherever panels or doors are designed for speedy access. On this intricate color camera, as well as the many other applications where Camloc fasteners are employed, they mean quick engagement, firm grip and quick release.

Write for our illustrated brochure containing descriptive information on the basic Camloc fastener line.

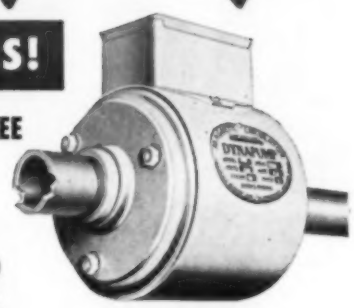
CAMLOC FASTENER CORPORATION
80 Spring Valley Road, Paramus, N. J.
WEST COAST OFFICE: 5410 WILSHIRE BLVD., LOS ANGELES, CAL.

For more details circle NED-568 H4 on enclosed inquiry slip

Give your product these

Dynapump

ADVANTAGES!



- **MAINTENANCE FREE** *No lubrication*
- **LEAKPROOF** *No shaft seal or stuffing box*
- **EASILY INSTALLED** *Compact, light, may be mounted in any position*
- **CORROSION FREE** *Stainless steel*
- **LOW FIRST COST**

Magnetic Fostoria Pumps

The revolutionary DYNAPUMP is a magnetically driven fractional horsepower centrifugal pump that eliminates 90% of pump difficulties. It is suitable for pumping water, solvents, refrigerants, corrosive or hazardous fluids, beverages, etc. Write for descriptive folder.

THE FOSTORIA PRESSED STEEL CORP., Dept. 808, Fostoria, O.
"Our 38th Year of Quality Products"
No. 5434

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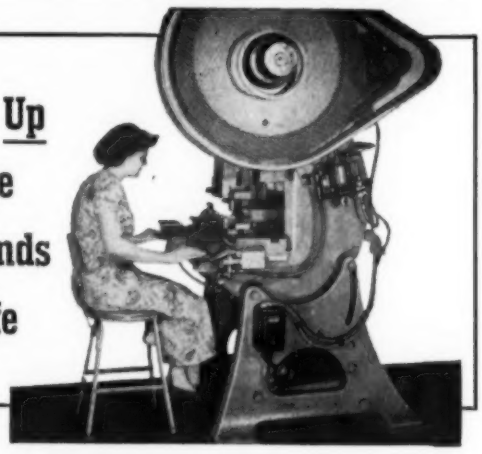

Output Up Because Her Hands Are Safe

Operator confidence soars—and so does production—with the Schrader Press Control. Definitely a two-hand device, it is designed so that the hands that feed the die must also operate the press. Neither valve can be tied down to get one-hand operation.

This *increased safety* of Schrader's Control lets operators build a worry-free rhythm that puts new speed in your presses in just a short time.

Get details on complete Schrader Two-Hand Press Controls—and other Schrader hand and foot-operated controls. Write for Pneumatic Control Folder A-278 today.

A. SCHRADER'S SON
Division of Scovill Manufacturing Company, Incorporated
459 Vanderbilt Avenue Dept. E-40 Brooklyn 38, N. Y.

▲ For more details circle NED-570 H4 on enclosed inquiry slip ▲

STRAIN RELIEF!

New Industrial Pressure Switch Absorbs Pressure Surges On Hydraulic Systems

Quad Ring Seal (optional) Eliminates Oil Return Line

- Oil-tight enclosure. Explosion-resisting types also available.
- Long-life snap switch mechanism in non-carbon tracking melamine case. 1 N.O. and 1 N.C. contact.
- Range locking nut • Easily adjustable • Dry seal pipe threads.

Write for Bulletin 9012 ADW. Address Square D Company, 4041 N. Richards St., Milwaukee 12, Wisconsin

SQUARE D COMPANY

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BENCH MILL
quill operates up to 45,000 rpm for precision machining work

Small parts made of steel, brass, aluminum and plastics can be machined to tolerances of 0.0001-in. by the Precise semiuniversal and universal bench mill. Using carbide rotary tools, the small milling machine has a head which may be adjusted from a vertical position through 360 degrees on the universal model. Horizontal arm holding the power quill may be moved through 60 degrees from horizontal in either direction on both universal and semiuniversal models. Model 50 power quill is rated at ¼-hp, operates on 115-v ac, is mounted on four sealed bearings and has continuous dial-selected speed adjustment from 10,000 to 45,000 rpm. Head has wide dovetail slides, adjustable gib and a 3¼-in. travel through micrometer feed screw. Table working surface of 4 x 12 in. has a ½-in. T-slot and 5-in. longitudinal travel. All travels are controlled by easily adjusted stops. Made by **Precise Products Corp.**, 1346 Clark St., Racine 11, Wis.

▲ For more details circle NED-572 H4 on enclosed inquiry slip ▲

SUBMERGIBLE PUMP
for wells up to 1000 ft deep

Four-inch and larger wells can be equipped with series of F & W submergible pumps which have capacities as high as 3360 gph. Pump is a multistage centrifugal unit close-coupled to a submergible electric motor. Both are lowered into the well on the discharge pipe through which water is pushed to the surface pressure tank. A waterproof electric cable conducts power to the water cooled, sealed-in-oil motor. Pumps are available in ½, ¾, 1, 1½, 2 and 3-hp sizes, with sizes up to 22½ hp available on special order. Operation is on single or three-phase current up to 550 v. Equalizing pressure feature maintains same pressure in motor as in surrounding well water. All motor and pump parts are kept under low differential pressure, regardless of depth the pump is submerged. Made by **Flint & Walling Mfg. Co.**, 909 N. Oak St., Kendallville, Ind.

▲ For more details circle NED-573 H4 on enclosed inquiry slip ▲

NEW Pioneer Stanflex

Plastic-Coated WORK GLOVES
With Custom-Fit Single-Seam Jersey Lining

PIONEER'S exclusive two-piece, single-seam lining (Pat. pend.) provides over 47 square inches of seam-free work surface. No seams on face of fingers, thumb, palm or back to chafe hands, wear out first. Elastic-knit jersey shapes to hand.

Wing-style thumb, curved fingers fit hand naturally, complete action freedom. Satin finish gives positive over-all grip.

Tough bonded vinyl coating has amazing resistance to cuts, snags, abrasion—outwears leather. Watertight, resists oils, acids, caustics, most chemicals.

Available in 12" gauntlet, 10" band top and knit wrist styles. Try them once—you'll make them your standard.

Bet You 6 Pairs . . .

Send us your order for 6 pairs any style Stanflex Gloves. They will outwear any plastic-coated glove you are now using, or simply return form enclosed for full refund. Order now . . . offer expires in 30 days.

The PIONEER Rubber Co. 234 Tiffin Road Willard, Ohio

Quality Gloves for 35 Years

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TEETH with lasting cutting accuracy

The tooth design of Brown & Sharpe Cutters gives you cleaner cuts . . . and their stamina "stretches out" sharpening dates. The Brown & Sharpe line covers all types and sizes, from plain milling cutters and end mills, to metal slitting saws and special form cutters. Write for illustrated catalog and select *exactly* the cutters you need. Brown & Sharpe Mfg. Co., Providence 1, R. I., U.S.A.

BUY THROUGH YOUR LOCAL DISTRIBUTOR

Brown & Sharpe

▲ For more details circle NED-575 H4 on enclosed inquiry slip ▲

keep costs down

with accurate job time records

CALCULAGRAPH

FIGURES ELAPSED TIME ACCURATELY

PRINTS DATE STARTING TIME FINISHING TIME TOTAL ELAPSED TIME

Keep production costs in line with automatically computed, precision Calculagraph job time records. Just stamp card at beginning and ending of the operation. Calculagraph prints date, starting and finishing time plus precision calculated elapsed time. One Calculagraph can record and compute job time data for one entire shop or department by handling any number of cards in any sequence. Accurate, printed Calculagraph records can be filed for future use in estimating on new orders and checking production efficiency. Calculagraphs are low in cost, practically maintenance-free and built for a lifetime of dependable service.

COUPON BRINGS FULL INFORMATION — FILL IN AND MAIL TODAY!

CALCULAGRAPH COMPANY
SUSSEX STREET, HARRISON, NEW JERSEY

Send complete data on Calculagraph to: 302

NAME _____ TITLE _____
COMPANY _____
STREET _____
CITY _____ STATE _____

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Low-priced WING NUT for light assemblies

Wing Type PALNUTS combine the convenience of finger tightening, with the security of spring steel locking action that defies vibration . . all at lower cost than ordinary wing nuts. Wing Type PALNUTS are available in #8-32, #10-32, #10-24, ¼-20 and 5/16-18 sizes, in choice of cadmium, nickel, chrome or other finishes to order.

Send for free samples, prices and literature.

— —provides all these advantages at lower cost than plain wing nuts

- Built-in locking action that stays tight until finger released.
- Precision-made to accurately fit standard threads.
- Easy finger tightening or removal, due to ample wings.

WING TYPE PALNUT TRADE MARK LOCK NUTS for quick, secure fastening at low cost

The PALNUT Company
45 Cordier St.,
Irvington 11, N. J.
In Canada:
P. L. Robertson Mfg. Co., Ltd.
Milton, Ontario

▲ For more details circle NED-577 H4 on enclosed inquiry slip ▲

thousands of users PROVE "HI-TEMP" C-5 THREAD COMPOUND IS BEST FOR ALL STUD THREADS and STAINLESS STEEL APPLICATIONS

✓ speeds up dis-assembly time
✓ prevents stud breakage
✓ eliminates pitting of stainless steel

NO MORE FROZEN OR GALLED STUDS . . EVEN AT 1800° F

Let us SEND you a FREE SAMPLE so you can PROVE to YOURSELF that C-5 will lick your toughest stud breakage problems!

To assure easy maintenance on products having threaded assemblies many leading product engineers have specified the use of Fel-Pro C-5 as an anti-seize coating on stud threads prior to final production line assembly.

Fel-Pro's exclusive Colloidal-Copper formula allows for easy separation and reduces stud breakage of threaded assemblies after long exposures to extreme temperatures. It eliminates pitting of stainless and alloy steel even where dissimilar metals are joined.

Conduct your own tests with C-5 "Hi-Temp" at our expense. Write on your company letterhead for Free Sample and complete data sheet TODAY!

594

FELT PRODUCTS MFG. CO. 1510 Carroll Ave., Chicago 7, Ill

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DISCOVER

how AIR POWER can speed your production jobs

Find out how Air Power delivered by Ingersoll-Rand Type 30 Compressors, can save time, money and man-hours in your operations. Here are facts and figures every man responsible for production should have. Also, the reasons why Type 30 Compressors give you a *greater* volume of compressed air per hp input.

782-3

CLIP AND MAIL, NOW

INGERSOLL-RAND CO., 11 Broadway, New York 4, N. Y.
Please send me, at no obligation, Booklet 1502-D on the complete line of I-R Compressors.

NAME_____ TITLE_____
COMPANY_____
ADDRESS_____
CITY_____ ZONE____ STATE_____
(Please Print)

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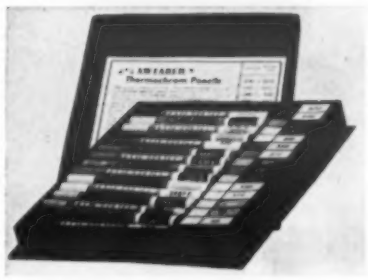
TEMPERATURE INDICATING CRAYONS cover 65 to 670° C temperature range



Spot temperature checks can easily be made on heated objects by marking them with a Thermocrom temperature indicating crayon. Crayon marks change color in somewhat less than 2 seconds time when a set temperature is reached. Fifteen different crayons, each marked with the temperature which it is designed to indicate, cover a range from 65 to 670° C. They are available either in complete pocket sets of 15, or in packages of 12 of any particular crayon. German development is distributed by **Bryson Oil Co.**, Dept. A, Harriman, Tenn.

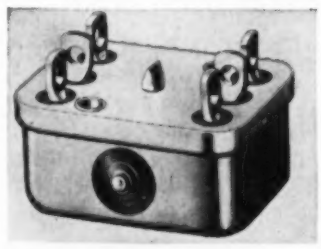
▲ For more details circle NED-580 H4 on enclosed inquiry slip ▲

BENCH MILLING MACHINE hand unit uses standard fixtures

T-slot equipped 4 x 22-in. table on this bench type hand milling machine has an 8-in. longitudinal rack and pinion travel and adjustable table stops. Hand lever can be adjusted to six positions. Machine has 6½-in. vertical capacity, sufficient to permit use of standard fixtures used on larger machines. Vertical operations can be provided with a hand lever or micrometer lead screw. Saddle with micrometer ball crank has 4-in. traverse movement. Eight spindle speeds range from 700 to 4500 rpm, with lower or higher speeds being optional. Power is furnished by a ⅓-hp G-E continuous duty motor. Production model is identified as No. 422 PM and tool room model as No. 422 TR. Made by **Viking Industries**, Dept. N, P. O. Box 22, Rockford, Ill.

▲ For more details circle NED-581 H4 on enclosed inquiry slip ▲

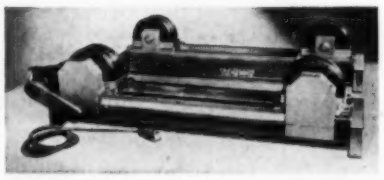
HERMETICALLY SEALED SWITCH small double-pole, double-throw type



Such environmental extremes as sand, dust, ice, humidity, oil, grease, water, fungus and high and low temperatures do not affect operation of model 8102 hermetically sealed snap-action blade switch. Of the double - pole double-throw type, it has a silastic actuator button that flexes at −90° F to 250° F and withstands 100-psi pressure differential inside or outside without rupture or leak. Either solder or screw type terminals are available. Resistive rating at 0 to 50,000 ft is 25 amp at 28 v dc or 100 v ac. Weight is 2 oz. Made by **Haydon Switch Co.**, Dept. N, 232 N. Elm St., Waterbury 20, Conn.

▲ For more details circle NED-582 H4 on enclosed inquiry slip ▲

TURNING ROLLS position large cylindrical work



Large cylindrical work can easily be positioned for welding or other operations using precision turning rollers. Models WRD and WRI have capacities of 5000 and 100,000 lb. They provide turning speeds from 0 to 80 ipm or 0 to 38 ipm through a geared transmission with sensitive micrometer speed control. Safe diameter range of the rolls is from 8 in. to 16 ft. Six center distance settings and six drive shafts permit exact cradling of any size work. Magnetic braking is standard equipment in models above the 10,000 lb class. All bearings are antifriction lifetime greased. Overload disk prevents crushing of the traction tires under heavy load. Made by **Aronson Machine Co.**, Dept. ND, Arcade, N. Y.

▲ For more details circle NED-583 H4 on enclosed inquiry slip ▲

MR. PRODUCTION FOREMAN:

YOU, TOO, WILL BE ASKED THIS QUESTION SOONER OR LATER, BETTER CHECK UP BEFORE IT'S TOO LATE!
WE'LL SEND YOU COMPLETE INFORMATION AND PRICES VIA RETURN AIR MAIL!
Phone, wire or write us RIGHT NOW!

Severance TOOL INDUSTRIES INC.
761 Iowa Ave., Saginaw, Michigan

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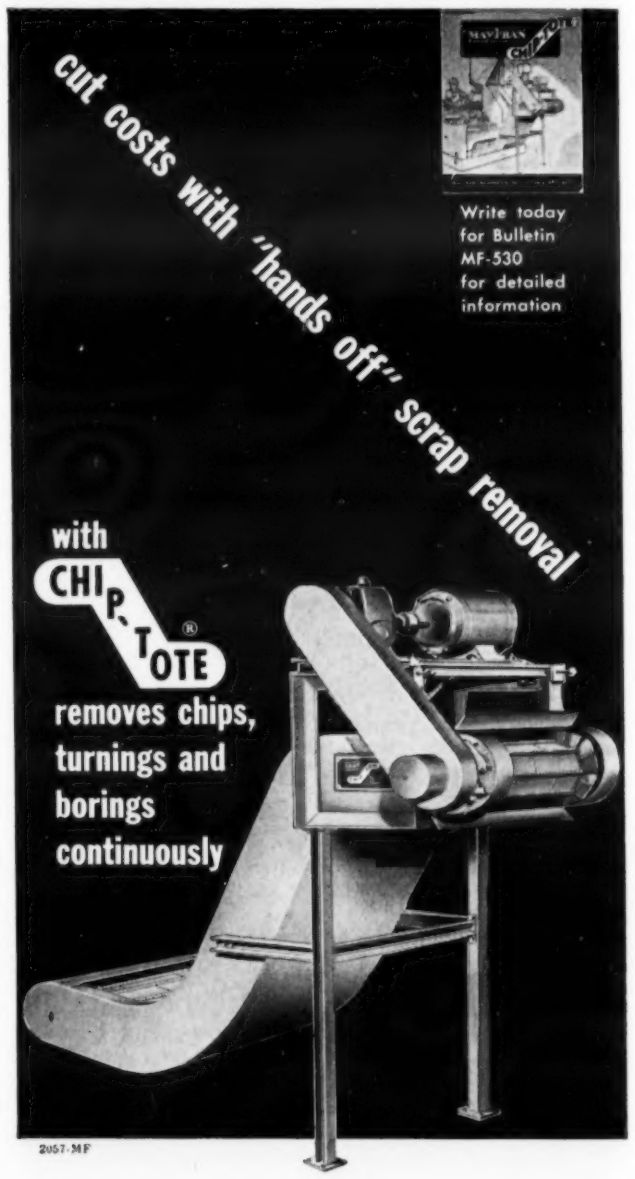
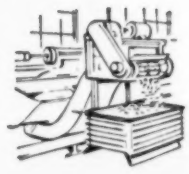


Cut production costs by eliminating downtime for manual scrap removal!

While machines are in continuous operation, the MAY-FRAN CHIP-TOTE automatic scrap conveyor removes borings, turnings and chips from your high production machine tools. Design features permit a wide range of sizes to fit all standard multiple spindle or automatic machine tools.



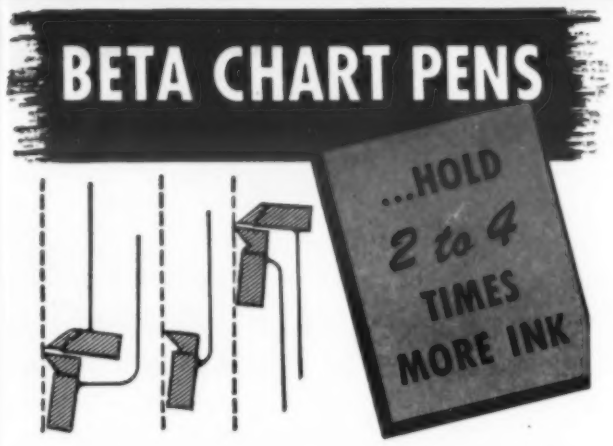
To slash production costs, specify . . . MAY-FRAN CHIP-TOTE automatic scrap conveyors.

DESIGNERS AND ENGINEERS OF COMPLETE SCRAP HANDLING SYSTEMS

MAY-FRAN ENGINEERING, INC.
1711 CLARKSTONE ROAD • CLEVELAND 12, OHIO

▲ For more details circle NED-585 H4 on enclosed inquiry slip ▲

BETA CHART PENS



Beta Fountain Pens hold two to four times the ink of ordinary chart inking pens. Regardless of the line thickness Beta Pens produce a smooth unbroken and uniform line. Pens shown are approximately actual size and can be arranged to reduce time interval between static and differential lines to only a few minutes. Beta Pens are especially suitable for seven day records. Price $1.10 (lower prices in quantities).

Send for bulletin No. 110.

AMERICAN RECORDING CHART CO.
3113 E. 11th St. • Los Angeles 23, Calif.

Available for Early Delivery

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for miniaturized precision-instrument components

JELLIFF ALLOY 800

RESISTANCE WIRE

the ideal resistance wire for

fixed and variable resistors of high ohmage — resistance boxes and bridges — voltmeter and wattmeter multipliers — and other miniature wire-wound units.

Where space is at a premium and performance is a "must", these outstanding qualities of Jelliff Alloy 800 will assure that your products conform to the tightest specs.

High resistivity, 800 ohms/cmf — Low Temperature Coefficient, ±20 ppm per °C — Non-Magnetic — Highly Stable Electrically and Mechanically — Diameters from 0.0009" to 0.0056" — Bare, enameled or oxidized, or insulated with silk, Nylon or cotton—Solders and winds easily.

For Complete Data Address
Department 11

THE C. O. JELLIFF
MANUFACTURING CORP. SOUTHPORT, CONN.

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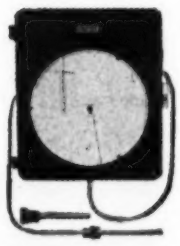
PALMER

MERCURY ACTUATED

TEMPERATURE INDICATING INSTRUMENTS

4½" DIAL THERMOMETERS

Made in 3 types to suit any requirements. Rigid stem, wall or flush mounted, 11 inches of scale reading. Interchangeable with standard industrial separable sockets. Stem can be placed at any angle and case can be rotated to any readable position.



RECORDING THERMOMETERS

Twelve inch die-cast aluminum case with black or white wrinkle or satin finish. Single or multiple pen construction. Electric or spring wound clock, 24 hour or 7 Day Revolution. Flexible Armor and bulb of stainless steel. Ranges—40+950°F. or Equivalent in °C.

INDUSTRIAL THERMOMETERS

Red-Reading Mercury—Extruded brass case — chrome finish. Ranges —40+950°F or Equivalent in °C.

RED-READING MERCURY LABORATORY THERMOMETERS

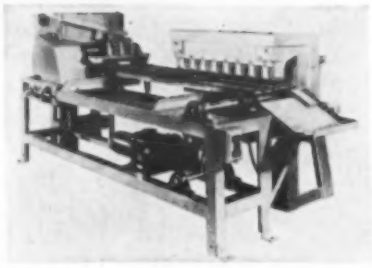
Thoroughly annealed for permanent accuracy. Complete line A. S. T. M. and fractional division types.

WRITE FOR CATALOG INFORMATION

PALMER THERMOMETERS, INC., Cincinnati 12, Ohio

▲ For more details circle NED-588 H4 on enclosed inquiry slip ▲

AUTOMATIC FURNACE
heats bar stock for upsetting



Combination of Roto - Flame furnace and mechanical hopper feed results in fully automatic unit for heating bar stock prior to upsetting. Bars are automatically conveyed through furnace at any desired speed. One version of equipment has a 39-in. heat zone. It heats 2-in. at the end of ⅝-in. bar stock at a production of 600 pieces per hour. Design of the unit enables operator to work away from heat zone. Made by **Gas Appliance Service, Inc.,** 1211 Webster Ave., Chicago 14, Ill.

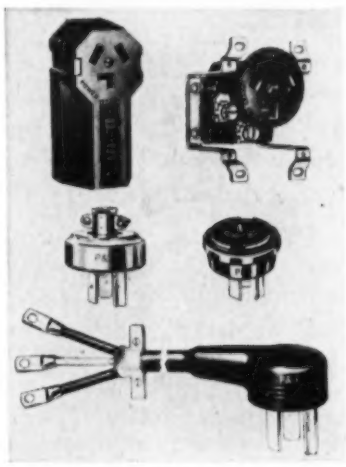
▲ For more details circle NED-589 H4 on enclosed inquiry slip ▲

SHORT ELECTRIC DRILL
⅜ and ½-in. capacity models

Short length of No. 123 and 383 electric drills facilitates their use in tight places. The 123 has ½-in. capacity in steel and 1⅜ in. in wood, while model 383 drills a ⅜-in. hole in steel and 1⅛ in. in wood. Chuck speed is 550 rpm no-load and 330 rpm full-load for larger model and 800 and 580 rpm for smaller unit. Both drills can be obtained for 115, 125, 230 or 250-v operation. Full antifriction bearings, alloy steel gears, momentary contact switch with pushbutton locking device and key type chuck are features. Made by **Stanley Electric Tools,** 104 Elm St., New Britain, Conn.

▲ For more details circle NED-590 H4 on enclosed inquiry slip ▲

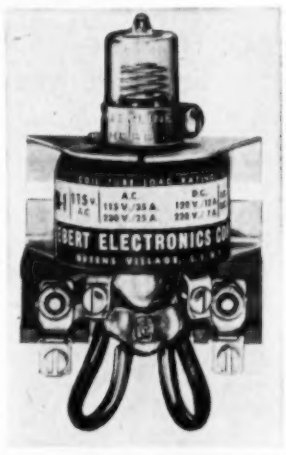
THREE-WIRE FITTINGS
30-amp receptacles, caps and cords



Line of 30-amp three-wire receptacles, caps and cord sets have L-shaped slots and blades. Receptacles, in surface and flush types, have "lay-in" pressure terminals for easy wiring. Cord grip caps are made in plastic and armored styles, latter being corrosion-resistant finished. Cord set is available in 36, 48 and 60-in. lengths and has non-separable rubber cap. Made by **Pass & Seymour, Inc.,** 50 Boyd Ave., Syracuse 9, N. Y.

▲ For more details circle NED-591 H4 on enclosed inquiry slip ▲

MERCURY PLUNGER RELAYS
handle loads to 60-amp 115-v



Mercury cup of improved mercury plunger relay is made of alumina which has high flexural strength. Bakelite blocks have been redesigned for ease of installation and Burndy connectors can now be set in either of two directions for load line connection. Relay is hermetically sealed in glass tube for operation in explosive atmospheres. Normally open EM-1 unit shown is rated 35 amp at 115 v ac and 25 amp at 230 v ac. Heavy duty HD-1 relay is rated 60 amp at 115 v ac and 35 amp at 230 v ac. Horsepower ratings are 2 hp at 115 and 230 v ac and ½-hp at 120 and 220 v dc. Normally closed contacts are available. Made by **Ebert Electronics Corp.,** 212-12 Jamaica Ave., Queens Village 28, L. I., N. Y.

▲ For more details circle NED-592 H4 on enclosed inquiry slip ▲

Sure cure for the "wobbles"

Bigger swivel bearing area on Bassick Series 99 casters keeps even heavy loads steady, guards against costly accidents.

These high-quality, double-ball bearing casters have a main swivel bearing diameter at least 1⅛" greater than wheel tread width. This makes for wobble-free performance, longer life, easier swiveling, reduced wear.

Write for complete specifications on the cost-cutting Bassick Series 99 casters. THE BASSICK COMPANY, Bridgeport 2, Conn. *In Canada:* Belleville, Ont.

Bassick A DIVISION OF STEWART SW WARNER
MAKING MORE KINDS OF CASTERS... MAKING CASTERS DO MORE

75 YEARS OF CASTER LEADERSHIP

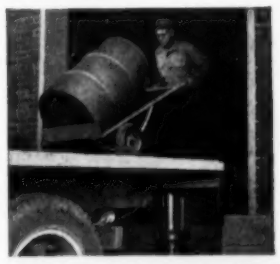
▲ For more details circle NED-593 H4 on enclosed inquiry slip ▲

Here's how a public utility *SOLVED* its truck-loading problem with a GLOBE self-leveling RAMP

This is the problem:

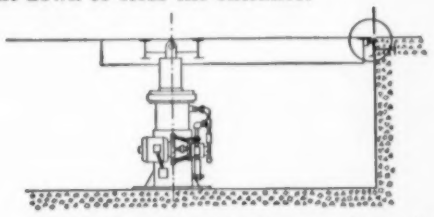
There is no outside loading wharf at the new Utilization building of Iroquois Gas Corporation, West Seneca, N. Y. And the shipping-room floor is above the level of the paved driveway. "Muscling" heavy loads between shipping room and truck or trailer would not only cost too much in time and money, but would increase the risk of injury to workers.

This is the solution:



Iroquois Gas installed a standard Globe type C-68E self-contained, self-leveling Ramp. No ground excavation was needed. Power cylinder, electric-motor oil pump, oil reservoir are a single integral unit, resting on a gusseted base plate. Loaded hand trucks are rolled across this hydraulically-powered platform quickly and safely. The Ramp "rides" with the truck bed as the truck springs flex under changing loads. Roll-over capacity is 16,000 pounds.

When not in use, the Ramp is lowered and the overhead door brought down to close the entrance.



This diagram shows typical Globe Self-Leveling Ramp installation. Use the coupon to get complete data on Globe Self-Leveling Ramps and other Globe OiLIFTS®

GLOBE THE BEST LIFT

MAIL COUPON NOW

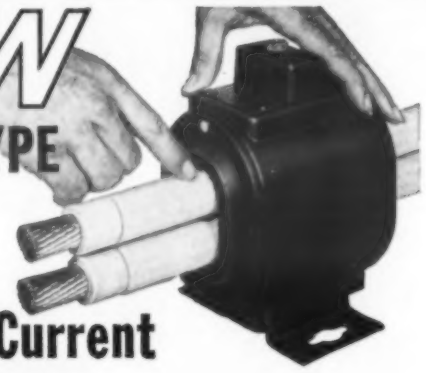
Globe Hoist Company NED-608A
1000 E. Mermaid Lane
Philadelphia 18, Pa.

Please send me additional data on Globe OiLIFTS.

Name.....
Address.....
City.....Zone....State.....

▲ For more details circle NED-594 H4 on enclosed inquiry slip ▲

NEW THRU-TYPE 600 VOLT Molded Current Transformer



Allis-Chalmers new Type TWM thru-type current transformer for indoor or outdoor application eliminates bolted connections, speeding installation. Primary conductors pass through an oval window large enough to accept two 500 MCM stranded conductors with 600-volt insulation.

The transformer is molded in thermo-setting epoxy resin. This material does not deteriorate, requires no painting. The transformer is compact and light in weight — will fit into multiple mountings in standard instrument transformer enclosures.

Get complete facts from your nearby Allis-Chalmers authorized distributor or district office. Or write Allis-Chalmers, Milwaukee 1, Wisconsin, for Data Sheet 61S8033.

A-4233

ALLIS-CHALMERS

For more details circle NED-595 H4 on enclosed inquiry slip

Take surface temperatures quickly, accurately... with the

Pyrocon

The handy Alnor Pyrocon is unequaled for quick, accurate reading of all surface temperatures . . . whether surfaces are metallic or non-metallic, flat or curved. Accurate temperatures are easily understood on the Pyrocon's direct reading scale face . . . without interpolation or need of conversion tables. A wide selection of thermocouples and extension arms permits adaptation to many types of service. For complete details and prices, send for Bulletin No. 4257. Illinois Testing Laboratories Inc., Room 529, 420 N. LaSalle Street, Chicago 10, Ill.

Alnor PRECISION INSTRUMENTS FOR EVERY INDUSTRY

For more details circle NED-596 H4 on enclosed inquiry slip

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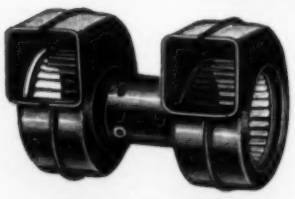


Redmond 200 CFM Double Blower

Made of heavy gauge steel, with 4¾" Torrington carefully balanced airotors delivering 200 Cu. Ft. per Min. Has 115 V, 60 C, 90 Watt, 1450 RPM type L double shaft rubber mounted motor.

53431 Each **$7.49** 6 Lots Each **$7.19**

Mounting Flanges

Steel 4¾" square flanges for mounting blower.

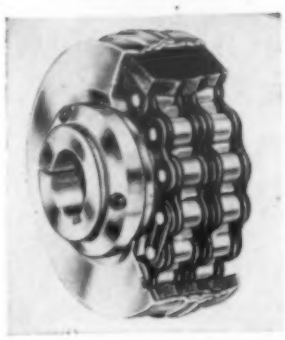
42764 Each **30c**

This Offer Subject to Prior Sale

THE HARRY ALTER CO.
1726 S. MICHIGAN AVE., CHICAGO 16
132 LAFAYETTE ST., NEW YORK 13

For more details circle NED-597 H4 on enclosed inquiry slip

FLEXIBLE COUPLINGS
five sizes have ⅜ to 2-in. bores



Connecting two shafts or a motor directly to a machine and compensating for dissimilar or undersized shafts, slight misalignment and radial thrust are uses for Gripmaster flexible couplings. Different sized shafts can be accommodated by removing or changing bushings. Five sizes are stocked with bores ranging from ⅜ to 2 in. and horsepower ratings from fractional to 200. Coupling consists of two hardened steel sprockets, strand of double roller chain, two bushings and a snap-on aluminum cover with oil retaining felt. Made by **Cullman Wheel Co.,** 1333 Altgeld St., Chicago 14, Ill.

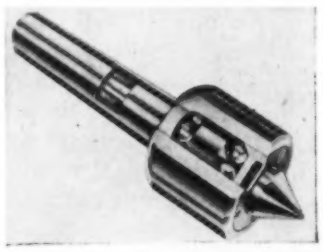
For more details circle NED-598 H4 on enclosed inquiry slip

VARIABLE SPEED MOTOR DRIVE
in speed ranges from 2:1 to 10:1

Redesigned Vari - Speed Motordrive in ¼, ⅓, ½ and ¾-hp sizes and in speed ranges from 2:1 to 10:1 features smaller and more compact construction. Unit is offered in 112 different assemblies to meet exact space requirements, in horizontal and vertical models and in 45-degree units with vertical down output shafts. Speeds from 3 to 4660 rpm are available. Threaded spiral groove lubrication system assures complete lubrication of all sliding surfaces. Overflow outlet carries excess lubricant away from disk faces and V-belt. Standard six-position handwheel, extended handwheel, electric remote and mechanical automatic controls are obtainable. Made by **Reeves Pulley Co.,** 1225 Seventh St., Columbus, Ind.

For more details circle NED-599 H4 on enclosed inquiry slip

BALL BEARING CENTERS
adjustable for normal wear



"Swirling action" bearing principle incorporated in line of MAC Multi-Action ball bearing centers permits periodic adjustment for normal wear. Ground bearing races and case hardened spindles provide a three-point ball contact for even wear distribution. Center accuracy can be maintained indefinitely within a 0.0001-in. tolerance. Model HDT with twin-row ball bearings and model HDR with combination ball and roller bearings are available. Both have an Oilite sleeve bearing in the center shank to support the spindle on zero, regardless of the position in which the center is used. Neoprene seal keeps grease in and dirt out. Made by **Whitfield Mfg. Co.,** 400 Oakland Ave., Washington Court House, O.

For more details circle NED-600 H4 on enclosed inquiry slip

AIR FILTER
protects pneumatic instruments

Dirt, oil, water and other foreign matter is prevented from entering pneumatic instruments by this compact air filter. It measures 8½ x 4⅛ in. and can be mounted in a supported line or bolted to a wall or panel. Filter consists of top cap with supply and outlet connections, chamber with drain cock at bottom, resin impregnated filtering sleeve and water baffle. Filter sleeve removes particles as small as 40 microns. Capacity is 4 cfm of air or natural gas, sump capacity is 12 cu in. and maximum working pressure is 150 psi. Made by **Foxboro Co.,** 26 Neponset Ave., Foxboro, Mass.

For more details circle NED-601 H4 on enclosed inquiry slip

"Retains flexibility — resists abrasion" says Redmond Company of TEMFLEX* 105 TUBING

In making field connections for the TRI-FLUX shaded pole motors built by Redmond Company, Inc., Owosso, Mich., Temflex 105 Tubing is slipped over the lead from one field coil, which is then twisted together with the next coil lead. Wires are welded and bent back; the tubing is drawn over the welded joint, and the field varnished and baked. "Temflex 105 resists baking heat, offers high dielectric strength, flexibility and resistance to abrasion," says Redmond.

Literature and samples of this Irvington extruded plastic tubing—approved by Underwriters' Laboratories for continuous operation in air at 105° C. . . . and for 90° C. *in oil* . . . are yours for the asking. *T. M. Reg. U. S. Pat. Off.

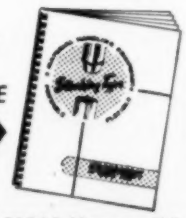
IRVINGTON VARNISH & INSULATOR
DIV. OF MINNESOTA MINING & MFG. CO.
14 ARGYLE TERRACE, IRVINGTON 11, N. J.
Plants: Irvington, N. J.; Monrovia, Calif.; Hamilton, Ontario, Canada

For more details circle NED-602 H4 on enclosed inquiry slip

Well Stacked!

In commodity warehouses and manufacturing plants "EMI" strong, safe, better engineered, stacking racks can save handling time and space from receiving to shipping. Our engineers are available to study your operation and make suggestions.

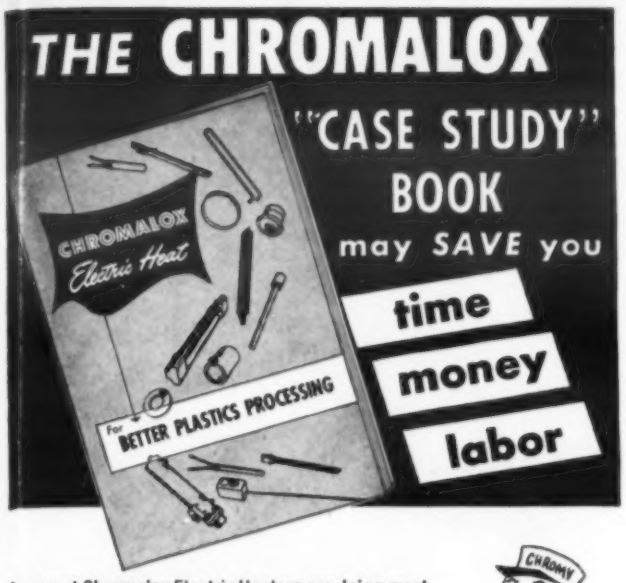
WRITE FOR THIS NEW CATALOGUE →



EQUIPMENT MFG. INC.
21566 Hoover Rd., Detroit 5, Mich.

For more details circle NED-603 H4 on enclosed inquiry slip

THE CHROMALOX "CASE STUDY" BOOK may SAVE you time money labor



Low cost Chromalox Electric Heaters are doing most plastics processing jobs better, more efficiently, at less cost. This booklet highlights some of these jobs which range from vinyl fusing and laminating through forming, embossing and molding.

Write today for your copy of this useful and profitable booklet of "Case Studies."

IB-26

Industrial Div., EDWIN L. WIEGAND CO., 7509 Thomas Blvd., Pittsburgh 8, Pa.

See other ad on pg. 4

CHROMALOX

ELECTRIC HEAT FOR MODERN INDUSTRY

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HEAVY PLATE FORMING FASTER with STEELWELDS

Because of simplicity of operation, heavy steel parts can be turned out quickly and accurately on Steelweld Bending Presses. Their heavy quality construction, including solid one-piece frame, finest electrical equipment and automatic oilers for lubrication of all bearings, keep Steelweld Press maintenance extremely low and assure uninterrupted production.

STEELWELD BENDING PRESSES CATALOG No. 2010

Send for free copy of catalog No. 2010.

THE CLEVELAND CRANE & ENGINEERING CO.
6654 East 281st St., Wickliffe, O.

STEELWELD PRESSES

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production flows smoothly...

at top speed, at all times, yet free of rejects

Kester makes 62 different fluxes to meet any requirements. Why not write our Technical Department for full information?

KESTER SOLDERING FLUX

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Newark 5, N. J. • Brantford, Canada

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IMPROVED ELECTRIC HOISTS design facilitates maintenance

Line of Wright frame 1 Speedway electric hoists includes standard long lift and close headroom models of 1-ton capacity and a four-part single-reeved model of 2-ton capacity. All have been redesigned to facilitate maintenance. Side cover and end cover can be quickly removed for servicing working parts. Automatic cam-actuated brakes are adjusted for lining wear by two simple screw settings. Compression brake springs and solenoid are factory set. Totally enclosed alternating or direct current motors to NEMA specifications are used. Push-button control is furnished on "all weather" cable. Parallel, cross, hook and rigid or bolt mounting styles are available. Made by **American Chain & Cable Co.**, Wright Hoist Div., York, Pa.

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ARC STABILIZER for high frequency welding machines

Improved model 13-D Missing Link high frequency automatic arc stabilizer for either metallic arc or inert gas shielded welding has a universal circuit and is adaptable to either ac or dc welding machines. It produces a steadier arc at lower noise levels than former models. Continuously variable intensity control permits precise adjustment for any high frequency. Fully automatic gas, water, afterflow and remote control characteristics are other features. Made by **Mid-States Welder Mfg. Co.**, 6029 S. Ashland Ave., Chicago 36, Ill.

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DO YOU KNOW? Spray Stop protective covers for flanges and valves in pipelines carrying corrosive chemicals now provide instant signaling of leaks. The slightest leak at a point protected by these covers causes a brilliant color change to take place in the cover. This warns that maintenance is required to prevent costly damage. Spray Stops can also be furnished on which fumes alone will trigger the color change. Made by Milsheff Corp., P. O. Box 1044, Darien, Conn.

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WHICH V-BELT is best for you?

If the correct size of endless V-Belt is not readily available, or if you have to tear down machinery to install, then the best belt to use is open-end V-Belting fastened with

ALLIGATOR **V-BELT FASTENERS**

★ In this way you can make up V-Belts in *any length* to fit *any drive* the fast economical way—V-Belts that perform exceptionally well.

★ In contrast to link-type belts these ALLIGATOR fastened V-Belts have just *one* strong joint . . . *stretch and follow-up maintenance are reduced to a minimum.*

ALLIGATOR **INTRODUCTORY V-BELT DRIVE UNITS**

contain V-Belting, Fasteners and Tools —everything you need in one compact package to make up V-Belts quickly. Available in sizes A. B, C & D.

Ask for Bulletins V-215 and V-216
Order From Your Distributor

FLEXIBLE STEEL LACING COMPANY
4664 Lexington Street, Chicago 44, Illinois

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NEW! LOW PRICE MOBILE TANK SPRAYER

No. 450 Complete Outfit
$169.00
With rubber tired wheels and rubber pads, internal mix spray gun, tire chuck and air hose.

Automatic pressure switch starts motor when pressure in tank drops to 30 lbs.—shuts off at 45 lbs. Twin compressor mounted on heavily welded 11½ gal. tank delivers 4 cu. ft. of clean, oil-free air per minute. Equipped with ½ h.p. A.C. motor, factory lubricated. Dozens of handy maintenance and production uses. Ask your mill supply house or write direct for catalog.

Write today for catalog
Compressors High & Low Pressure
Paint Sprayers
Spray Guns

W. R. BROWN CORP.
2673 N. NORMANDY AVE., CHICAGO 35, ILL.

SPECIALISTS IN PORTABLE SPRAYERS FOR OVER 20 YEARS

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1st with Underwriters' Listing

CLARK's L.P.-GAS CARLOADER*

1. Greatly reduces engine maintenance:
Eliminates unburned carbon deposits and crankcase dilution.
Eliminates fuel pump and complicated carburetor adjustments.

2. Eliminates obnoxious exhaust fumes:
L.P.-Gas provides almost perfect combustion, excellent for indoor operations.

3. Provides safe, efficient operation:
Vacuum ignition switch is interlocked with fuel line and manifold, impossible to spill fuel or load-up engine. High compression head (8.5 to 1) gives maximum economy and power from high octane L.P. Gas. Quickly demountable tank takes 3 minutes to change. Stellite valves and seats prevent burning from high flame temperature of L.P. Gas.

For details, call your local Clark dealer, listed under "Trucks, Industrial" in the Yellow Pages. Or send the coupon for specifications.

*4000 lb. capacity, available with standard shift, Hydratork or Dynatork

CLARK EQUIPMENT
Industrial Truck Division
CLARK EQUIPMENT COMPANY
Battle Creek 21, Michigan

☐ Send details on LPG truck

Name_____
Firm_____
Address_____
City_____ Zone_____ State_____

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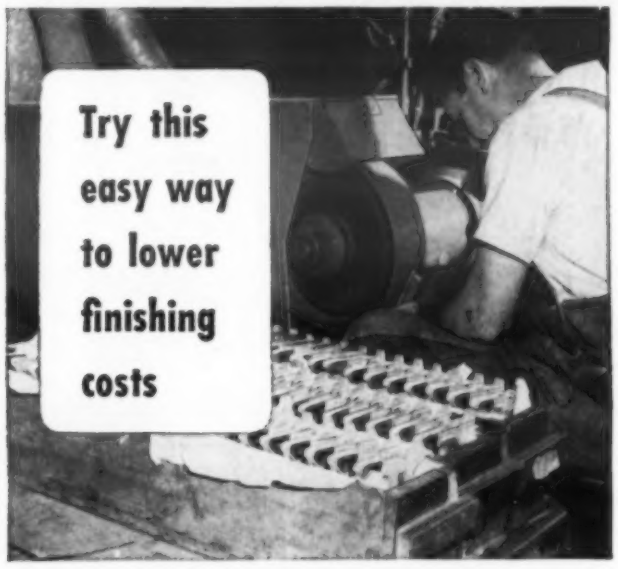

If you grind, smooth or polish metal, wood, leather, rubber or plastic products, investigate the finer finishing qualities of Jewel Brand Velvet Joint Abrasive Belts. For once you've tried them, you'll find that sharper, tougher Jewel Brand Belts not only cut cleaner, faster and smoother, but actually last longer . . . reduce downtime . . . save time and labor on job after job. Prove this for yourself. Let an experienced Jewel Brand Abrasive Engineer help you select the *right* belt for your finishing operation now. Write for details. Abrasive Products, Inc., 525 Pearl Street, South Braintree 85, Mass.

JEWEL BRAND *coated* **ABRASIVES**

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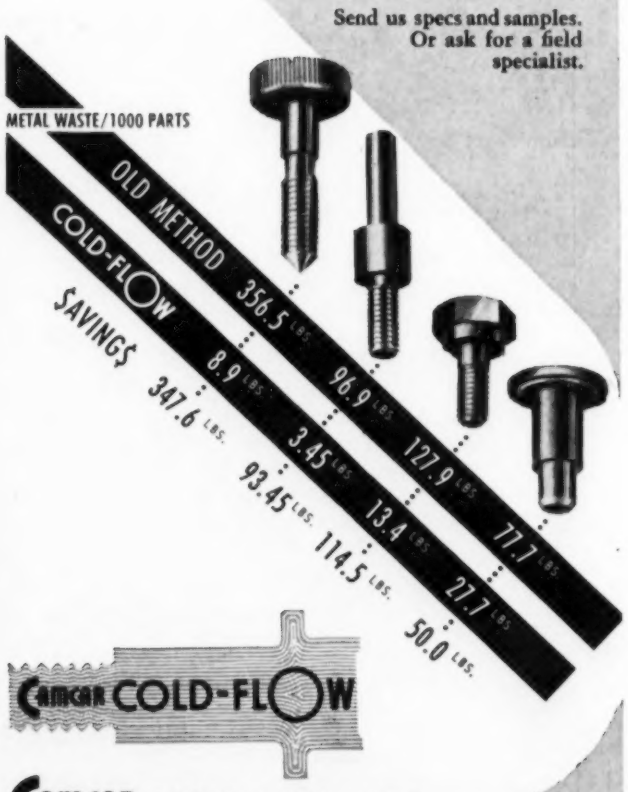
CAMCAR

COLD-FLOW SKINS THE COST CAT

. . . by *pressure-forming* metal parts from wire stock . . . in contrast to older methods that cut out parts from large diameter bars. And Cold-Flow skins the cat in other ways . . . reduces assembly time, by forming single intricate shapes replacing two and three-part units.

Cold-Flow strengthens the stock. Metal grain smoothly follows the part contour . . . is particularly compressed at the surface for a smooth wear-resistant hide. A prolific producer in most all metals, Cold-Flow delivers parts in volume to keep your assembly purring.

Send us specs and samples. Or ask for a field specialist.



CAMCAR COLD-FLOW

CAMCAR SCREW & MFG. CORP.
ROCKFORD, ILLINOIS
TELEPHONE 5-9451
TELETYPE RK-8653

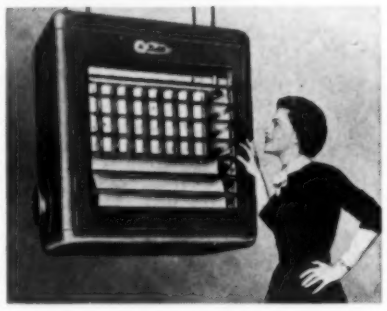
▲ For more details circle **NED-614 H4** on enclosed inquiry slip ▲

BRUSH-TOP CANS
capacities up to 1 quart

Layout blue, sealing compounds, touch-up enamels, cements and similar liquids may be contents of this line of leakproof brush-top cans, made in 3/16, ½ and 1-pint and 1 quart capacities. They have either a ring handle or detachable wood handle. Lugs soldered on opposite sides of the screw cap facilitate opening, even with greasy hands. Flat vulcanized brushes are ½ or 1-in. wide and soldered to the caps. Made by **George D. Ellis & Sons, Inc.**, Dept. N, 4040 N. American St., Philadelphia 40, Pa.

▲ For more details circle **NED-615 H4** on enclosed inquiry slip ▲

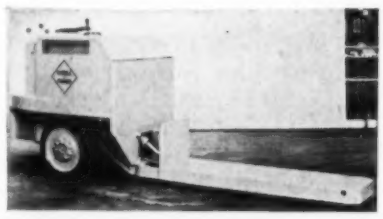
OIL-FIRED UNIT HEATERS
ten small sizes announced



Ten small sizes of oil-fired unit heaters with gun type oil burners are offered with outputs from 112,000 to 200,000 Btu per hour. They are offered with varying outlet air temperatures and noise levels to suit the installation and for process and special heat applications. Operation can be with drafts as low as 0.01-in. Factory-wired heaters are equipped with adjustable louvers and are rated at 80 per cent efficiency. Propeller fan throws air from 37 ft for smaller size up to 75 ft for largest size. Made by **Delta Heating Corp.**, Dept. N, Trenton 8, N. J.

▲ For more details circle **NED-616 H4** on enclosed inquiry slip ▲

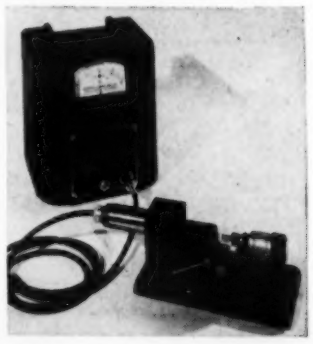
PLATFORM TRUCK
handles skids with varying heights



Platform low height of 7 in., plus a lift of 10 in. enables this 6000-lb capacity platform truck to handle skids of widely varying heights. Platform is 20 x 72 in., with other sizes available to meet requirements. To accommodate low platform position, truck is equipped with four trailing wheels which support the load. These wheels are mounted in tandem and are articulated for travel over uneven floors. Rolotac snap-acting control for operating truck provides instantaneous make-and-break of all circuits to minimize arcing. Made by **Elwell-Parker Electric Co.**, 4502 St. Clair Ave., Cleveland 3, 0.

▲ For more details circle **NED-617 H4** on enclosed inquiry slip ▲

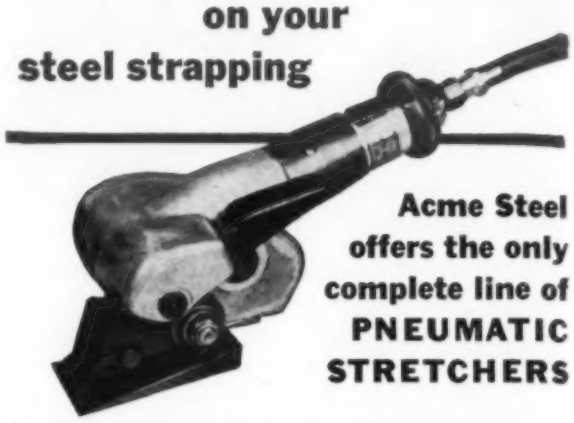
ELECTRONIC MICROMETER
measures small parts to 0.00001-in.



Standard electronic amplifier and gage head cartridge are combined with a standard indicating bench micrometer to permit measurement of small parts to 0.00001-in. at a magnification of 18,000 times. This magnification is continuously variable from 1800 to 18,000 times. When the tool is used for extremely fine measurements, setting is made to Johansson gage blocks or other precision gages. Easily operated retracting lever provides for rapid placing of work between measuring points. Micrometer screw is readily clamped in position and a small adjustable-height table holds the part being measured. Measuring pressure is adjustable from 3 oz to 2½ lb when used at 0.0001-in. sensitivity. Made by **Brown & Sharpe Mfg. Co.**, Dept. 43, Providence 1, R. I.

▲ For more details circle **NED-618 H4** on enclosed inquiry slip ▲

AIM for preset tension on your steel strapping



Acme Steel offers the only complete line of PNEUMATIC STRETCHERS

These new time-saving Acme Steel Strapping Tools can be set in advance for uniform, consistent tension. There's no guesswork. The Pneumatic Stretchers do the work—reducing employee fatigue. There are Acme Steel Pneumatic Stretchers for tensioning strapping on all sizes and shapes of containers, packages and bundles . . . and a model to suit your needs. For details, write Acme Steel Products Division, Dept. JK-84, Acme Steel Company, 2840 Archer Avenue, Chicago 4, Illinois.

AIM *for Safe, Lower-Cost Shipping* ACME STEEL

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O. D. grinding customers praise G Bond wheels

"Many more pieces per dressing . . . 100% better finish . . . cuts faster and cooler . . . holds form better . . . less grinding time per piece . . . dresses easier."

Those are just some of the advantages listed in a steady stream of endorsements coming from users of Norton G Bond wheels on all types of cylindrical and centerless grinding applications.

Such advantages mean valuable production economies and improvements never before possible. Made with the most efficient vitrified bond ever produced, G Bond wheels are ready to add the work-speeding, profit-increasing "Touch of Gold" to your own O.D. grinding jobs. See your local Norton Distributor, or write NORTON COMPANY, Worcester 6, Mass. Distributors in all principal cities. *Export:* Norton Behr-Manning Overseas Incorporated, Worcester 6, Massachusetts. W-1578

Making better products . . . to make other products better

NORTON
and its **BEHR-MANNING** *division*
NORTON: Abrasives • Grinding Wheels • Grinding Machines • Refractories
BEHR-MANNING: Coated Abrasives • Sharpening Stones • Pressure Sensitive Tapes

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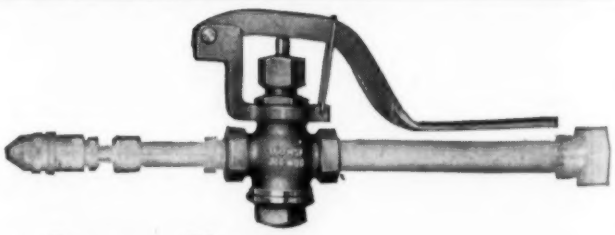

Spray, Clean with O-B Lever-Operated Globe Valve

This lever-operated O-B globe valve has many applications for spraying and cleaning in industry, on farms, and in commercial operations. The valve is shown here with a typical spray attachment. Ohio Brass supplies darker shaded parts--valve, yoke, lever, and wire clip. Pressing on the lever opens the valve. It closes automatically when pressure is released. Clip can be used to hold valve in open position. Globe comes in ¼, ⅜, ½, ¾, and 1-inch sizes. Rated pressure is 150 pounds for steam, 300 pounds for water, oil, or gas.

Ohio Brass makes a complete line of bronze valves for industrial use. Write today for additional information.

4458-V

O-B VALVES Ohio Brass MANSFIELD OHIO, U. S. A.

▲ For more details circle **NED-621 H4** on enclosed inquiry slip ▲

for the best in TEFLON* depend on JOHN CRANE

engineering leadership and facilities

*DuPont trade-mark for tetrafluoroethylene resin

When you use John Crane Teflon products you get *all* the advantages of this remarkable material—because you get the finest in fabrication "know-how" and quality.

"John Crane" fabricates Teflon for countless applications, including rods, tubing, tape, sheets, gaskets, bellows, washers, insulators, electrical parts, valve discs, "C-V" Rings, braided packings, coverings for dough sheeting rolls and heat sealing jaws, and a wide variety of other forms. Our engineers are ready to work with and assist you in your particular needs or problems.

Let us know your requirements. Send for our 12-page illustrated catalog. Crane Packing Co., 1811 Cuyler Ave., Chicago 13, Illinois.

JOHN CRANE CRANE PACKING COMPANY

In Canada: Crane Packing Co., Ltd., 617 Parkdale Ave., N., Hamilton, Ont.

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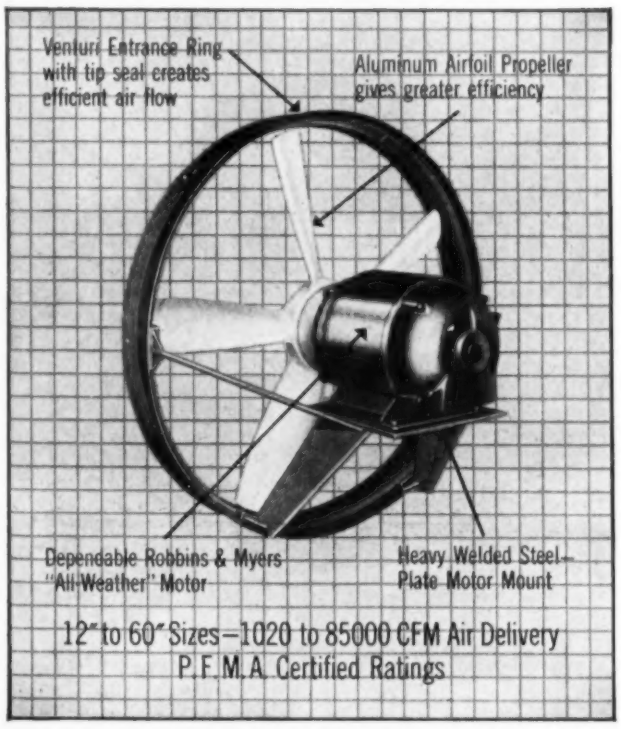
HEAVY-DUTY DEPENDABLE



PROPELLAIR® TYPE CD FANS

Use this versatile fan anywhere—for general duty ventilation in side-wall mountings or installed in Sky-Blast® roof ventilators or in hoods and ducts where high resistance is encountered. Modern Propellair Direct Connected Fans are ideal for removal of heat, dust, moisture, fumes, and smoke.

Single Name-plate Guarantee

Dependable Robbins & Myers motors in single phase or "All-Weather" polyphase designs give long, trouble-free service. Explosion-proof and glass insulated motors are also available. Propellair's single name-plate guarantee covers both fan and motor, and is backed by 22 years of research and engineering. Whatever your air moving problem may be, our engineers will be glad to make a survey and give you their recommendation. There's a rugged Propellair Fan for most applications.

Write for Bulletin 690-N

PROPELLAIR®
DIVISION OF ROBBINS & MYERS • INC.
SPRINGFIELD • OHIO

Man Cooler Sky-Blast Tubeaxial Vaneaxial Extended Shaft

For more details circle NED-623 H4 on enclosed inquiry slip

JIB CRANES
full rotating 6 and 15-ton models

Self-supporting pillar type jib cranes of 6 and 15-ton capacities have span of 25 ft and 14½-ft vertical clearance. They can rotate 360 degrees in either direction. Roller bearing ring, ball joint and ball thrust socket built into the top of the support pillar account for ease of operation under load. Independent concrete embedded foundations occupy only 5 sq ft of floor area. Cranes are offered with or without electric hoists, latter being operated from shoe type collectors on trolley wires on the boom or from rubber covered messenger cable. Slip ring contact is optional. Made by **R. G. LeTourneau, Inc.**, Dept. 41-35, Longview, Tex.

For more details circle NED-624 H4 on enclosed inquiry slip

BULLETIN BOARDS
cabinet type measures 28 x 35 x 4 in.

Line of bulletin boards for office, plant, or institutional use is constructed of Philippine mahogany finished with high gloss lacquer. Style 70 cabinet type has 28 x 35 x 4-in. inside depth and cork posting surface. Hinged glass door protects contents. Sign panel is opaque white plastic furnished with any desired wording. Concealed fluorescent tube lights up sign panel as well as entire inner area. Special sizes are offered in style 70 as well as in flush types. Made by **Industrial Products Co.**, 2807 N. Fourth St., Philadelphia 33, Pa.

For more details circle NED-625 H4 on enclosed inquiry slip

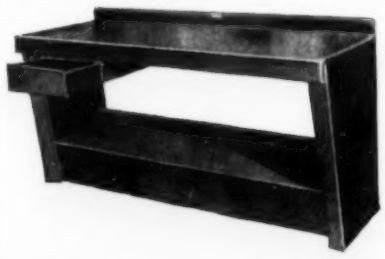
SURVEY INSTRUMENT
battery operated ionization type

Surface measurement of any low level alpha, beta or gamma contamination can be performed with the Samson model 2582 ionization type survey instrument. It is self-contained and battery operated. Three alpha ranges cover count rate from 0 to 12,500 counts per minute, corresponding to radium gamma ranges of about 0 to 18 milliroentgens per hour. Alphas with energies as low as 1 mev or betas as low as 15 kev can be detected. Neon flasher in handle indicates operation. Made by **Nuclear Instrument & Chemical Corp.**, Dept. NED, 229 W. Erie St., Chicago 10, Ill.

For more details circle NED-626 H4 on enclosed inquiry slip

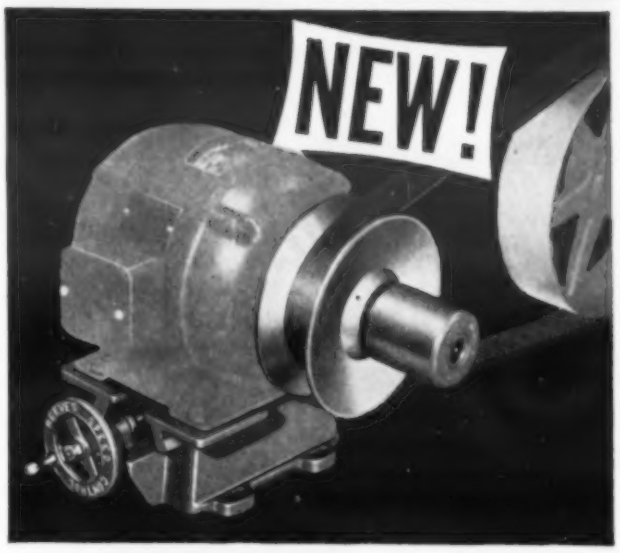
STEEL WORK BENCHES
tops of steel, masonite or wood

Added to Modern-Flow steel work bench line are 16 models which offer a choice of 12-gage steel, Masonite covered steel or laminated wood tops.



Benches will support vises, small punch presses, grinders, drill presses, or lathes without special reinforcement. Power tools can be left plugged into double outlet on either leg and rested on lower ledge until needed. Heavy gage steel legs slope inward for toe room and can be bolted to floor. Enclosed steel drawer is pilferproof. Benches in this 210 series are available in 5 and 6-ft lengths. Made by **Aurora Equipment Co.**, Equipto Div., 690 Prairie St., Aurora, Ill.

For more details circle NED-627 H4 on enclosed inquiry slip



REEVES *Completely new redesigned* **MOTOR PULLEYS** *Smaller units—More HP!*

Check all these new REEVES features

1. New, smaller disc assemblies—engineered for new or old NEMA Motors.
2. New spiral-groove lubrication for rust-free, trouble-free service.
3. One-point lubrication when unit is stopped *or in operation.*
4. Superior base construction for greater rigidity and strength, reduced vibration and noise.

Write today for complete details. **Specify ND10a-V545.**

REEVES PULLEY COMPANY • COLUMBUS, INDIANA

For more details circle NED-628 H4 on enclosed inquiry slip

MODERN CUTTING-OFF MACHINE

Cuts off longer pieces than regular automatic machine — *any length you want.* FAST cutting and chamfering of tubing, pipe, shafting. Check the following figures:

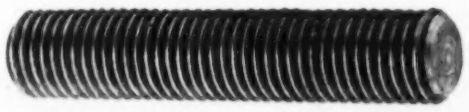
½" Tubing Cuts and Chamfers both outside edges of ½" .030 wall tubing, 5" lengths, every 2.5 seconds.

1¼" Cold Rolled Cuts and Chamfers both ends, 20" long, at rate of 1 every 20 seconds.

1" Tubing Cuts and Chamfers both outside edges, pieces 3" long. One every 3 seconds.

4" THREADED STUDS

Modern Automatic Cutting-Off Machines available in 4 sizes, handling work up to 6¾" O.D.



WRITE FOR CATALOG

Cut and chamfered at one time—in 8 sec.—from 10 ft. length of stock already threaded (¾" U. S. Standard). Clean cut. Clean chamfer. Nuts start easily, with no extra finishing required.

MODERN MACHINE TOOL CO.
JACKSON MICHIGAN

For more details circle NED-629 H4 on enclosed inquiry slip

TUMBLE GRAV-I-FLO FINISH ... *tumbling machines take*

31% to **80%**

more workload in the same floor space

Cutting Materials Shorten Cycle by 15% to 25%!

Grav-i-Flo equipment and supplies save substantially on mechanical deburring and finishing of metal parts, as well as produce a superior finish.

Complete Source: Machines in 5 sizes; natural and synthetic deburring and finishing chips and compounds; accessories for production tumbling.

SEND FOR CATALOG showing complete line of Grav-i-Flo equipment, accessories and supplies.

GRAV-I-FLO CORP., Dept. NED8 Sturgis, Mich.

☐ Please send complete catalog. ☐ Have Sales Engineer call. ☐ We are sending samples.

Company_____
Name_____ Position_____
City_____ State_____

For more details circle NED-630 H4 on enclosed inquiry slip

CUT CORROSION COSTS

WITH

TYGON PAINT

Easily applied liquid plastic dries quickly to form a tough film that resists acids, alkalies and oils.

Used with Tygorust Primer, Tygon Paint simplifies maintenance painting—cuts surface preparation—outlasts conventional paints many times over.

WRITE FOR BULLETIN 750 420 D

U. S. STONEWARE
AKRON 9, OHIO

For more details circle NED-631 H4 on enclosed inquiry slip

FROM 50% REJECTS down to 1%

...and Carpenter Stainless Tubing made the difference.

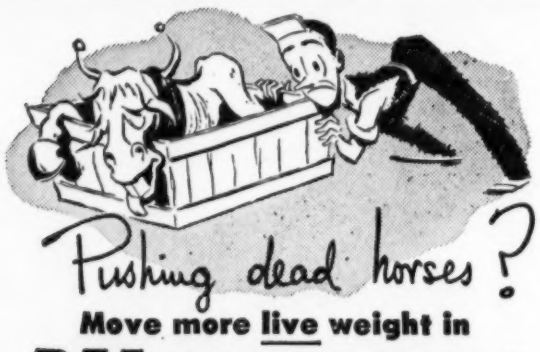
For this tough flaring job two brands of stainless tubing were tried with 50% rejects. After switching to Carpenter *rejects dropped to 1%.*

GET THESE NEW FACTS!

Just off the press is the new Carpenter Condensed Data File. Packed with facts on properties, corrosion resistance, weights, dimensions. Tells the story of Carpenter quality—Carpenter uniformity. Write for your copy, *today.*

THE CARPENTER STEEL COMPANY
Alloy Tube Division, Union, New Jersey

For more details circle NED-632 H4 on enclosed inquiry slip



Move more live weight in

BAL-built trucks of

AEROFIBRE

Samson Box Truck—One of Bal's many types of trucks featuring hard vulcanized Aerofibre...the material that is 50% lighter than aluminum, yet wears like armor plate.

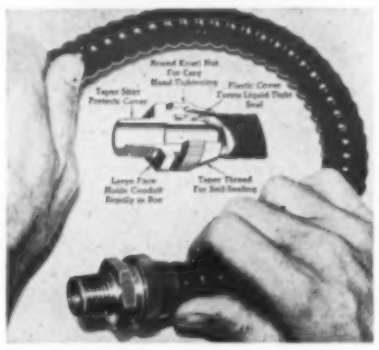
Constructed by Bal's own craftsmen in any size, the Samson Box Truck has thick steel reinforcing hardware and no-bulge body bands, compound steel top-rail, solid hardwood bottom. It is indestructible as a tank but rolls like a baby buggy.

Bal Also Builds Trucks In Open, Drop Front or Shelf Designs. Write for complete catalog

SINCE 1898 william BAL corporation 11 JOHNSON ST NEWARK 5, N. J.

For more details circle NED-633 H4 on enclosed inquiry slip

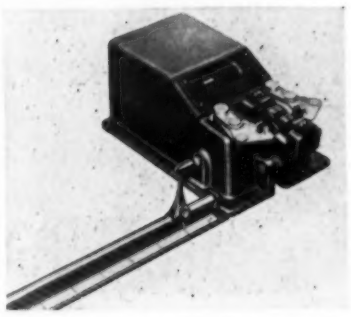
FLEXIBLE ELECTRIC CONDUIT
liquid-tight, dust and vaporproof



Underwriters' Laboratories specifications for all types of flexible conduit are met by Marco-flex type G flexible conduit for industrial wiring. It is liquid-tight, dust-proof and vapor-proof and has high puncture and crush resistance. Sealgrip fitting uses covering material of conduit to form gasket that is integral with entire length of conduit. Installation is without special tools. Other commercially available fittings can be used. Made by **Marco Industries Co.,** Dept. NED, 207 S. Helena St., Anaheim, Calif.

For more details circle NED-634 H4 on enclosed inquiry slip

WIRE STRIPPING MACHINE
cuts and strips both ends of wire



Semiautomatic Mark 1 wire cutting and stripping machine cuts and strips both ends of solid or stranded wire in one operation. Interchangeable heads permit it to handle from 14 to 24-gage wire. Plastic, asbestos, nylon, Teflon or braided glass insulations can be stripped. Device is air-actuated and foot-pedal controlled. An inexperienced operator can cut and strip up to 2000 wires per hour. Knife and stripper blades are high speed steel. Self-regulating gripping fingers prevent damage to wire. Made by **Technical Devices Co.,** 2350 Centinela Ave., Los Angeles 64, Calif.

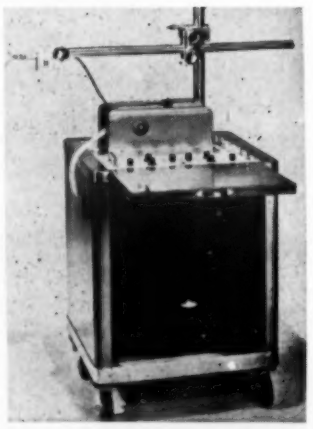
For more details circle NED-635 H4 on enclosed inquiry slip

INSULATED FILE CABINET
provides safe-like protection

This four-drawer letter-size insulated file cabinet carries the UL class C label which demands 1 hour protection of records at 1700° F, as well as explosion and impact resistance. Drawers extend completely for access to rear records; rubber cushioning stops minimize drawer-slam damage and noise; and roller bearings provide easy operation. Full steel lining inside each compartment increases strength and seals insulation, while double bolts on each drawer provide necessary impact strength. Key or combination locks can be specified. Made by **Diebold, Inc.,** Systems Div., Dept. EF, Canton 2, O.

For more details circle NED-636 H4 on enclosed inquiry slip

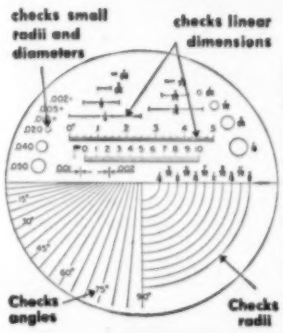
TENSION ANALYZER
for filamentary materials



Accurate measuring and recording instantaneous tension loads in such filamentary materials as textiles and fine wire of reasonable flexibility is function of this tension analyzer. It measures both static tension levels and dynamic tension variations while the material is running at high production speeds. Transducer element which detects the tension can be positioned on any plane at any level from 1 to 8 ft above the floor. Recording is on a direct writing oscillograph. Made by **Brush Electronics Co.,** Equipment Dept. RT-2, 3405 Perkins Ave., Cleveland 14, O.

For more details circle NED-637 H4 on enclosed inquiry slip

THE Original BELL & HOWELL Pocket Comparator



Saves time and money inspecting small dimensions

● Here's *guaranteed* accuracy in checking small dimensions at a price any business can easily afford. Save time and money measuring wear on cutting tools, checking forms and dimensions of punches, dies and gauges—as well as chamfers, threads and small holes on production parts.

Thousands in use by America's leading precision manufacturers. It's the greatest time-saver since the micrometer!

price only $36.00 order today

a product of BELL & HOWELL CO. distributed ONLY by

See Your National Tool Co. Representative or Local Jobber

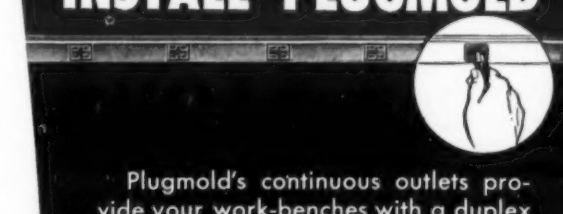
NATIONAL TOOL CO.

Write for FREE descriptive folder

11210 Madison Avenue Cleveland 2, Ohio

For more details circle NED-638 H4 on enclosed inquiry slip

NEED MORE OUTLETS for power tools? **INSTALL PLUGMOLD**



Plugmold's continuous outlets provide your work-benches with a duplex or NEMA grounded electrical outlet every 30", 18", 6", or closer in clusters — will give your workers the outlets they need for efficient use of power tools, testers, heaters and other electrical production devices.

You can easily install Plugmold in your plant. Write for the Plugmold booklet today.

WIREMOLD makes your plant production **MORE EFFICIENT!**

WIREMOLD one-piece construction **MAKES WIRING EASIER**

Carry wiring safely on the surface, anywhere in your plant! Sturdy steel raceways, in four sizes to meet every wiring requirement — readily adaptable to any wiring layout. For new wiring, or extending existing circuits. Write for full information.

WIREMOLD products are backed by a firm guarantee. See page 7 of Wiremold Catalog No. 19.

The WIREMOLD Company
HARTFORD 10, CONNECTICUT

For more details circle NED-639 H4 on enclosed inquiry slip

AND BE SURE!

Red-E Precision CENTERS are the answer to all your turning and grinding ACCURACY problems.

Built to take weights up to 200 tons. Speeds to 4000 RPM.

Your ONE Source

for ALL Centers — over 200 models — Standards and Specials for Lathes, Grinding, Milling, Spinning, Turret, Screw Machining, Burnishing and Gear Cutting operations.

ACCURACY is GUARANTEED
Buy from your RED-E Distributor
CENTER Specialists Since 1908

RED-E TOOLS READY TOOL COMPANY
561 Ironiston Ave • Bridgeport, Conn.

For more details circle NED-640 H4 on enclosed inquiry slip

Ask your CHASE BAG C-man for money-saving packaging ideas

"LONG DISTANCE" CHASE PACKAGING

MULTIWALL BAGS...Once the contents are sealed, they're safe. Available 2 to 6 plies, all types.

TELESCOPING BALE CUPS...Burlap laminated with asphalt to 45-lb. crinkled paper. Tailor made to fit your specific needs.

TOPMILL BALED BURLAP...The finest burlap obtainable. Quality controlled, tested, graded...in many widths and weights.

Call or write today for additional information!

SINCE 1847 CHASE BAG COMPANY

Industrial Department: 309 W. Jackson Blvd., Chicago 6, Ill.
30 BRANCHES AND SALES OFFICES—STRATEGICALLY LOCATED

For more details circle NED-641 H4 on enclosed inquiry slip

Here's a CONVEYOR BELT that ACID CAN'T HARM

Our Plastex treated belt is coated with impervious vinylite and is especially designed to resist acids, grease and heat. Ideal for canneries, food storage plants, food processing, meat packers and machine assembly lines, this white, green or maroon belt is tough and odorless. Can you use it in your business?

FREE

14 Page Guide to Buying the Right Conveyor Belt for your Particular Job. Illustrated Uses, Maintenance Tips, Sizes, Prices.

OVER 200 SIZES 35 WIDTHS 7 THICKNESSES

BUFFALO WEAVING & BELTING COMPANY
209 CHANDLER STREET BUFFALO 7, NEW YORK
NEW YORK PHILADELPHIA CHICAGO DETROIT LOS ANGELES

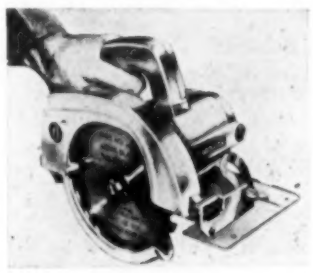
For more details circle NED-642 H4 on enclosed inquiry slip

VARIABLE TRANSFORMER
output range from 0 to 135 v

On input of 115 v 50-60 cycles, output range of model PA-3 Auto - transformer is variable from 0 to 135 v. Maximum load rating is 0.4 kva, maximum output current, 3.0 amp. Unit is adaptable for work bench or other applications such as line voltage control for power supplies and instruments, control of heat, motor speeds or light intensity. It measures 6½ x 6⅛ x 6½ in. and is equipped with jeweled pilot light, on-off switch, convenient fuse, cord, plug and receptacle. Made by **Standard Electrical Products Co.**, 2239 E. Third St., Dayton, O.

For more details circle NED-643 H4 on enclosed inquiry slip

ELECTRIC HAND SAW
clutch prevents kickback and bucking



Model 125 6-in. Homemaster electric hand saw features built-in clutch which eliminates kickback or bucking if blade binds in the material, preventing injury to operator, material and saw. It is fitted with precision ball bearings and has simple controls for depth and angle of cut. Handle is center-balanced and has gun grip and trigger switch. Universal motor mounted in die-cast polished aluminum housing drives blade through hardened helical gears at speeds up to 3300 rpm under normal working load. Fan cools motor and keeps sawdust away from cutting point for working visibility. Standard and optional equipment includes gages and work table. Made by **Porter-Cable Machine Co.**, 35 Exchange St., Syracuse 8, N. Y.

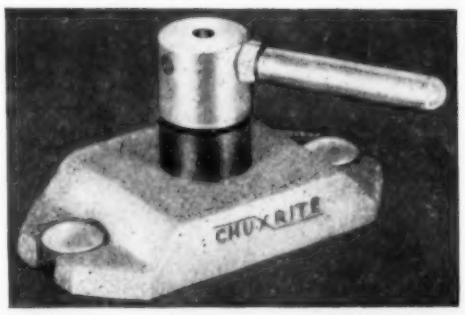
For more details circle NED-644 H4 on enclosed inquiry slip

SELENIUM RECTIFIER
features automatic constant voltage

Developed for heavy duty production testing, this selenium rectifier has an adjustable output ranging from 3 to 15 v, 25 to 120 amp dc, filtered to 1 per cent RMS ripple. Automatic constant voltage is ±1 per cent. Also featured is automatic correction of ±5 per cent for fluctuations of alternating current input which is 220 v, three-phase, 60 cycles. The 20 x 20 x 46-in. unit is convection cooled for 35° C ambient temperature operation. Made by **Richardson-Allen Corp.**, Dept. NED, 116-15 Fifteenth Ave., College Point, L. I., N. Y.

For more details circle NED-645 H4 on enclosed inquiry slip

COLLET VISE
holds cylinder-shaped parts



Cylinder-shaped parts up to ¼-in. diameter can be held securely for drilling, tapping, lathe or milling operations by the Chuxrite collet vise. It can also be used on bench for assembly work, polishing, cleaning and soldering. Partial turn of handle, attachable in any of three different positions, locks work in place. Base opening prevents chip-clogging and lets finished parts drop out when chuck is released. Seven sizes span range from 1/16-in. in increments of 1/32-in. Made by **Foredom Electric Co.**, Dept. 1-A, 27 Park Pl., New York 7, N. Y.

For more details circle NED-646 H4 on enclosed inquiry slip

Splice...Tap...Terminate with "Lock-Tite" Connectors

T&B ENGINEERED

Once tightened, T & B Lock-Tite connectors stay tight . . . on solid rod, tubing, or all types of cable from #4 to 1000 MCM.

Simply installed with a key wrench, Lock-Tite fittings have a built-in lock-washer and serrated saddle and socket to assure high-conductivity connections . . . they can be used over and over.

LOCK-TITE LUG — All-around pressure prevents damage to cable strands. Seven sizes fit all cable sizes from #4 to 1000 MCM.

LOCK-TITE TEE-PARALLEL TAP — Use as a tee, parallel, elbow, two-way or reducing connector. Hinged top hooks to the "main"; lower opening holds the "branch".

LOCK-TITE TWO-WAY CONNECTORS — Use as an end-to-end connector or reducer. Each cable separately held by individual serrated saddles.

For complete information on T & B Lock-Tite connectors send for a free folder. T320

THE THOMAS & BETTS CO.
INCORPORATED
24 Butler Street, Elizabeth 1, New Jersey
Thomas & Betts Ltd., Montreal, P.Q., Canada

For more details circle NED-647 H4 on enclosed inquiry slip

SICK COMPRESSOR? Your Westinghouse Distributor can take it to his fully equipped shop for a major overhaul.

Get Fast Service when you need compressor repairs

● Your Westinghouse Air Compressor Distributor knows how important a good air supply is to your business. So when you call him for repair service or a new air compressor, he'll get to your shop or station fast.

Westinghouse Air Compressor Distributors are located throughout the country. Each distributor has a fully equipped repair shop, an experienced maintenance crew, and a complete stock of Westinghouse Air Compressors and repair parts. He's listed in the classified section of your telephone directory.

Westinghouse Air Brake COMPANY
INDUSTRIAL PRODUCTS DIVISION • WILMERDING, PENNSYLVANIA

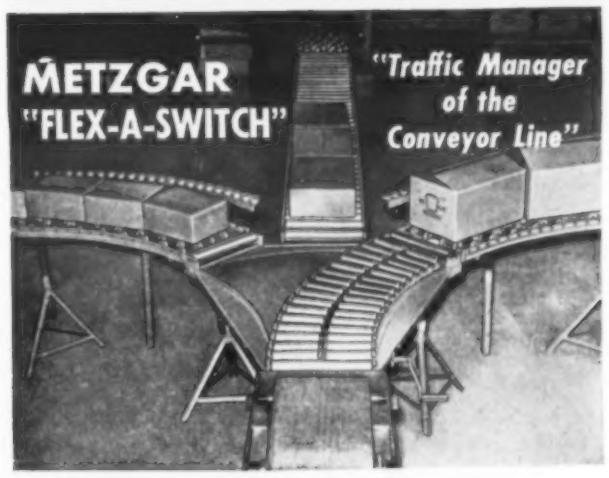
Manufacturers of air compressors, pneumatic cylinders, actuators, air control devices of all kinds, engineered pneumatic control systems, and front end loaders.

Factory Branch: EMERYVILLE, CALIF.
Distributors throughout the United States . . . Consult your Classified Directory.
Distributed in Canada by: Canadian Westinghouse Co., Ltd., Hamilton, Ontario

A LOT OF AIR HERE. Your Westinghouse Distributor carries a full stock of Westinghouse Air Compressors for fast delivery.

NEW MOVIE AVAILABLE entitled, "AT THIS MOMENT"—showing a vivid story of modern railroad progress. Length 26 minutes, on 16mm. color sound film. For use of film write: United World Films, Inc., 1445 Park Ave., New York or Association Films, Inc., 347 Madison Ave., New York.

For more details circle NED-648 H4 on enclosed inquiry slip



Gets maximum efficiency from your conveyor system.

Ideal for switching production lines to various machines for isle system warehousing, assembling orders and all gathering and distributing uses.

Standard Widths:
11½", 15", 18"
Through & 45° R & L.
Spur Switch: 45° R. or L. & Through.

May be furnished with electric or pneumatic Remote Control.

● WRITE FOR PRICES ●

METZGAR CONVEYOR CO.

416 Douglas N. W.

MFRS. OF WHEEL & ROLLER GRAVITY & LIVE ROLLER CONVEYORS • POWER BELT CONVEYORS • SWITCHES • ACCESSORIES & REEL DOLLIES

GRAND RAPIDS 4, MICH.

For more details circle NED-649 H4 on enclosed inquiry slip

AT LAST!
LOW-COST CLARIFICATION
for finish grinding coolant

with

THE NEW AUTOMATIC HOFFMAN MAGNA-FLOMASTER COMBINATION

In fine finish grinding operations absolute clarity of coolants is imperative if product finish is to be protected. With the new Magna-Flomaster Combination coolants are actually doubly protected because they get double clarification. First by the Magnaflo where 75% to 90% of ferrous solids are settled out or removed by a magnetic plate. Second by the Flomaster Filter where wheel grit and "fines" are removed.

The result is a coolant so clear it can be used over and over again, eliminating the need for large purchases of make-up coolant. Coolant savings, plus the smallest possible maintenance expense, add up to a truly low-cost operation.

HERE'S WHAT YOU GET

- Complete protection of finish
- The finest filtering at full flow rates Removes particles from 20 down to 5 microns
- Low-cost operation—low filter load gives almost double the normal cartridge life
- Oil and coolant savings
- Reduced maintenance costs. No filter bags to change — no plates to scrape down. Flomaster Filter cartridges take only a few minutes to change
- Near-dry sludge for easy disposal

Write for technical bulletins giving full details

LOPS IN VALUE SINCE 1905 **Hoffman**
INDUSTRIAL FILTRATION EQUIPMENT & SERVICE
U. S. HOFFMAN MACHINERY CORP., 225 LAMSON STREET, SYRACUSE 6, N. Y.
In Canada: Canadian Hoffman Machinery Co., Ltd., Newmarket, Ont.

For more details circle NED-650 H4 on enclosed inquiry slip

1-TON POWER PRESS
mounts punches and dies of any shape

Need for die sets is eliminated by the Power-Di press, a 1-ton unit which mounts punches and dies of any shape. They are automatically aligned in opposing ram and bolster members. Compact design makes it possible to set several machines in series for simultaneous piercing, notching or forming operations on large sheets. Power-Di unit is available as a bench or pedestal press or an operational accessory for Swanson turret indexing units. Self-contained units have 1¼-in. stroke, 3 to 6-in. shut height and operate at 200 strokes per minute. Made by **Swanson Tool & Machine Products, Inc.,** Dept. PD-33, 808 E. Eighth St., Erie, Pa.

For more details circle NED-651 H4 on enclosed inquiry slip

PIPE LEAK DETECTOR
for pressure or vacuum systems

Portable Dragnet leak detector will test piping of gas, steam, water, oil, refrigerant, air and other pressure or vacuum systems. It consists of test pump, air storage tank, pressure gage, transparent bubble bowl with nonfreezing fluid and flexible hose for connecting to piping under test. System is first pumped with air to desired pressure and by-pass valve is closed. Any leak in piping under test brings air from the storage tank through the bubble bowl. Bubbling thus indicates a leak. Filler plug in tank is provided for injecting leak-locating odorant or chemical. Complete test can be made in 10 to 15 minutes. Made by **Universal Controls Corp.,** 731 W. Davis St., Dallas, Tex.

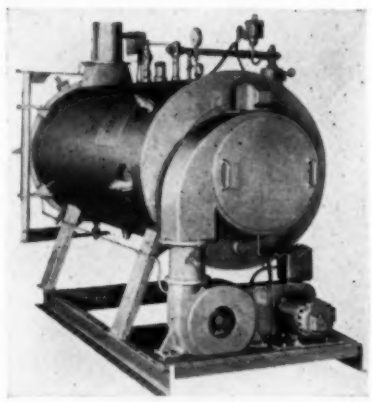
For more details circle NED-652 H4 on enclosed inquiry slip

AIR-OPERATED ROTARY TABLE
speeds variable from 40 to 100 rpm

Variable speeds of 40 to 100 rpm are attained by this portable rotary table when connected to standard air line. It is designed for use on surface grinders and is available in 6 and 10-in. diameters. Only cross feed need be used, reducing possible machine error in precision grinding. Table can be used on sine plate or angle fixture, utilizing standard surface grinder wheel. It can be used with standard permanent magnetic chucks or simple fixtures to suit part. Lapping plates are available to convert table into portable or bench lapping machine. Made by **Vulcan Tool Co.,** Dept. B, 730 Lorain Ave., Dayton 10, O.

For more details circle NED-653 H4 on enclosed inquiry slip

STEAM GENERATOR
sizes range from 15 to 30 hp



Light No. 3 fuel oil, gas or combination firing of either oil or gas can be used in the Steam - Pakette steam generator. Developing 125-psi steam pressure, the unit is made in 15 to 30-hp sizes. Dimensions are 85⅜ x 40 x 58⅝ in. Generator is delivered wired to the control panel and is built in accordance with the ASME boiler code. Capacity can be expanded in the field at low cost after installation. Made by **York-Shipley, Inc.,** 85 Jessop Pl., York 4, Pa.

For more details circle NED-654 H4 on enclosed inquiry slip

Instruments for Measuring AIR TEMPERATURE and VELOCITY

TEMPSCRIBE Recording Thermometer

Available in 10 different ranges to cover −30°F to +160°F temperatures, and with spring-operated chart drives for any of the following chart rotations: 8 hours, 24 hours or 7 days.

This entirely self-contained, compact and reliable temperature recorder automatically writes a continuous record of temperature changes on a replaceable chart. Record shows at a glance maximum and minumum temperatures and the duration of temperatures above or below any given point; also shows the exact time of every temperature change and how rapidly it takes place. Recording pen and bi-metallic element are built in hinged, removable door which is also front of instrument. Thus, by merely changing doors it is easy to interchange temperature ranges. Instrument is 8" tall, 5½" wide and 4½" deep. Charts are 4½ inches in diameter.

Write for Bulletin I-715

FLORITE Anemometer

In principle, this unique instrument operates as an anemometer but provides instantaneous, direct readings of air velocity without timing, calculations or reference to charts. Readings are obtained by holding the instrument in the air stream so that air blows against its circular face, causing rotation of a multi-blade rotor mounted in instrument housing. The circular scale surrounding the rotor instantly turns to correct air velocity reading under an index pointer on scale window. Furnished with detachable handle (not shown) and leather case.

Available in two styles: One with a scale of 0-1000 ft./min., and the other with a double scale of 0-3000 ft./min. and 0-35 miles per hour.

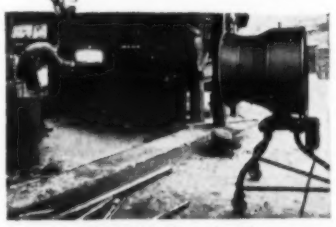
Write for Bulletin I-760

BACHARACH Industrial Instrument Co.
7301 PENN AVENUE • • PITTSBURGH 8, PA.

For more details circle NED-655 H4 on enclosed inquiry slip

For Man-Cooling!

Coppus Airplane Type Heat Killer® cools large areas — restores efficiency



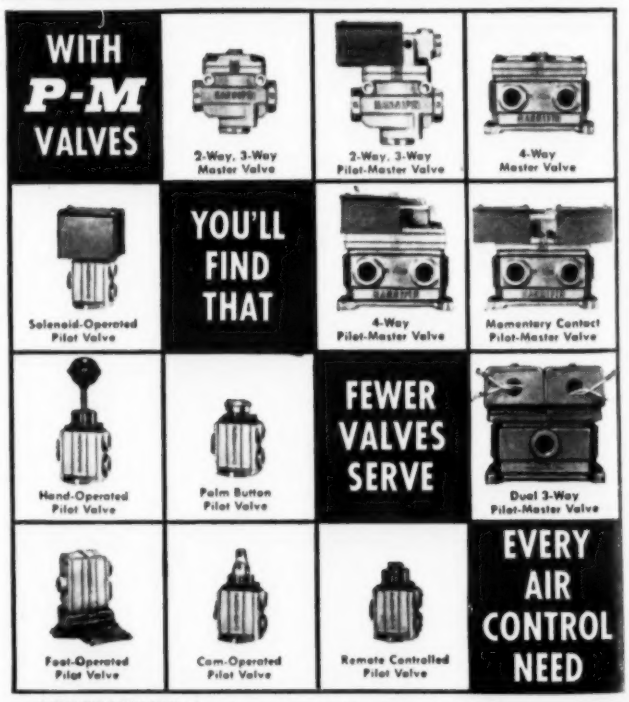
HEAT KILLER on the job in drop forge plant.

Steel mills, drop forge plants, foundries and other plants with hot working conditions find this Coppus Heat Killer increases worker efficiency . . . at reasonable cost. *A single fan cools large areas.*

Other types also available for cooling furnaces, electrical equipment, for driving out gases, drying out products, drawing out fumes. Write now for detailed information. COPPUS ENGINEERING CORPORATION, 408 PARK AVENUE, WORCESTER 2, MASSACHUSETTS.

ANOTHER COPPUS "BLUE RIBBON" PRODUCT

For more details circle NED-656 H4 on enclosed inquiry slip



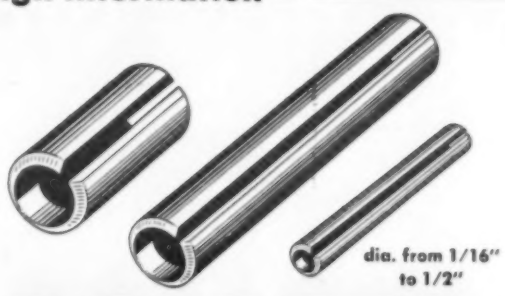
ADAPTABILITY! Singly, or in combination, these valves provide 2-way, 3-way or 4-way control. Hand, foot, cam or solenoid operated. Every pipe size from ¼" through 1¼". Write for Bulletin 231.

HANNIFIN

Hannifin Corporation, 1127 S. Kilbourn Ave., Chicago 24, Ill.
AIR AND HYDRAULIC CYLINDERS • PRESSES • AIR CONTROL VALVES

For more details circle NED-657 H4 on enclosed inquiry slip

Design information—



ROLLPIN

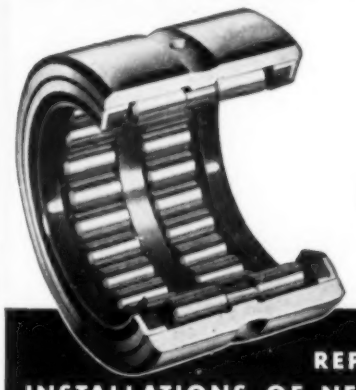
. . . the slotted tubular steel pin with chamfered ends

- Easily driven into holes drilled to normal production tolerances
- Self-locking . . . exerts constant pressure against hole walls
- Easily removed with drift or pin punch
- Fits flush . . . is reusable

Offers assembly-time savings over rivets, set screws, straight, serrated or cotter pins, dowels, hinge pins and many others.

WRITE for detailed catalog—Elastic Stop Nut Corporation of America, 2330 Vauxhall Road, Union, N. J. Address Dept. R18-837.

For more details circle **NED-658 H4** on enclosed inquiry slip



NEW McGILL® sealed GUIDEROL® full type roller bearing

REPLACES COSTLY INSTALLATIONS OF NEEDLE BEARINGS AND SEPARATE SEALS

Dependable GUIDEROL Bearings are now available in a new series that incorporates single or double seals without any increases in overall bearing width. It's the first sealed unit to replace ordinary needle bearings having auxiliary sealing arrangements. Housings can be less complicated and smaller with less machining.

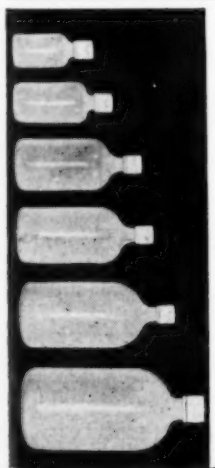
Complete with commercial lip type seals, the new unit costs very little more than standard bearings for shaft sizes of 3/8" to 2 inches. Five seal combinations increase application possibilities for this first sealed full-type roller bearing.

Detailed information is contained in a new bulletin, SGR-54. Write for it today.

McGILL® precision bearings

McGILL MANUFACTURING CO., INC. 101 N. LAFAYETTE ST. VALPARAISO, INDIANA

For more details circle **NED-659 H4** on enclosed inquiry slip



WHY RISK

use UNBREAKABLE PLAXPAK® Polyethylene BOTTLES

LIGHTWEIGHT

CHEMICALLY INERT

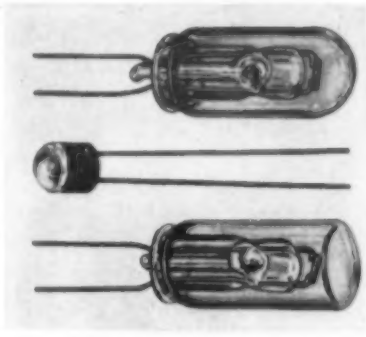
SMOOTH POURING

They will improve plant safety . . . simplify handling of bulk fluids . . . protect purity of liquids put in them. For details, write for "Plaxpak Utility Bottles" brochure or ask to see your nearest Plax distributor.

PLAX CORPORATION
DEPT. D, WEST HARTFORD, CONNECTICUT
IN CANADA: Plax Canada, Ltd., Montreal & Toronto

For more details circle **NED-660 H4** on enclosed inquiry slip

MINIATURE CRYSTAL PHOTOCELLS operate sensitive relays directly

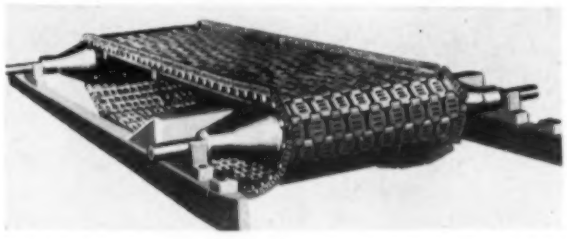


Standard crystal photocells as small as 1/4-in. diameter and 1/4-in. deep deliver from 2 to 5 ma when exposed to 50 to 100 foot-candles with 100 v applied across cell and load. This is sufficient for direct operation of sensitive relays. Photocells show usable resistance change with light intensities as low as 0.0001-foot candle. Speed of response is approximately 0.01-second at 50 foot candles. Photocells are available in either hermetically sealed glass enclosures or in the subminiature type, both having substantially similar characteristics. They respond to visible light, ultraviolet, x-rays and nuclear radiations. Made by **Standard Piezo Co.,** Carlisle, Pa.

For more details circle **NED-661 H4** on enclosed inquiry slip

OPEN LINK CONVEYOR BELT for use in industrial furnaces

Open link design of this belt conveyor adapts it for use in annealing, normalizing and other industrial furnaces where maximum heat circulation is desirable. Conveyor is available in standard widths from 18 to 60 in., and is suitable for operation up to 1800° F. It can be used with drums, roller and rail supports for company's existing solid link belt installations. Open link belt has replaceable heavy hinge sections to provide long wear life. Made by **Standard Alloy Co.,** Dept. CS, 1679 Collamer Rd., Cleveland 10, O.



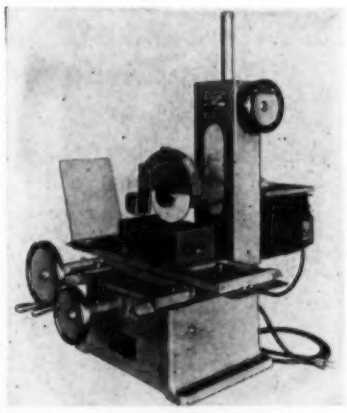
For more details circle **NED-662 H4** on enclosed inquiry slip

METAL POWDER makes high strength parts

Reduced oxide type Plast-Iron B-212 compacting powder is formulated for manufacture of mechanical parts where exceptionally high tensile and transverse strengths are required together with good abrasion resistance. Material, which is not exceptionally ductile, can be made to show narrowly restrained growth on sintering by the addition of small percentages of copper. Specimens containing only 3 per cent copper are reported to be equivalent in strength to conventional powders with 10 per cent copper. If part shrinkage is not an objection, B-212 can be used without any copper addition. Made by **National Radiator Co.,** Plastic Metals Div., 301 Central Ave., Johnstown, Pa.

For more details circle **NED-663 H4** on enclosed inquiry slip

SURFACE GRINDER is accurate to 0.0001-in.

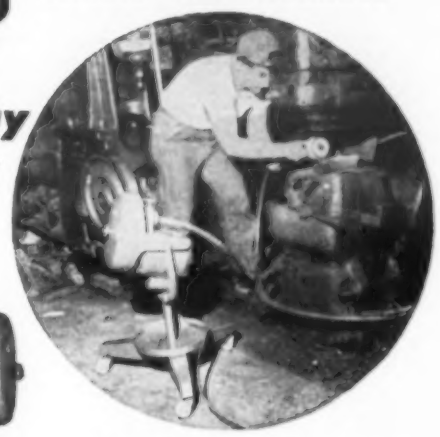


Rigidity and power for heavy cuts and sensitivity for precision finishing are found in the Butterfly model SG-48 hand-fed bench type surface grinder. Its 5½ x 9-in. table provides 7½ in. clearance under a 6-in. wheel. A 4 x 8-in. permanent magnetic chuck accommodates 5½ x 8½-in. work. Longitudinal table travel is 10 in. and transverse travel is 6 in. Spindle is given axial and radial rigidity by duplex angular contact ball bearings at both ends. Grinder is powered by 1/3-hp, 3450 rpm motor which is rubber cradled on a resilient base. Grinder is accurate to 0.0001-in. and is offered with various optional equipment. Made by **Harvey Mfg. Corp.,** 382 St. Paul St., Rochester 3, N. Y.

For more details circle **NED-664 H4** on enclosed inquiry slip

STOW flexible shaft machines

your best buy because they serve your customers better



Versatile . . . choice of operating speeds . . . specially designed to provide *highest efficiency!* Constant speed and other variable speed models also available.

For over 75 years, STOW FLEXIBLE SHAFT MACHINES have been famous for long trouble-free performance.

STOW

Don't delay—write *today* for your free copy of CATALOG #51.

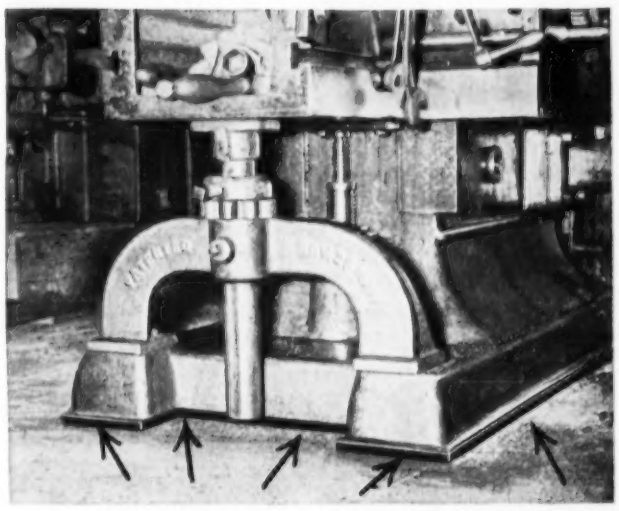
STOW MANUFACTURING CO. 26 Shear St., Binghamton, N.Y.

For more details circle **NED-665 H4** on enclosed inquiry slip

GALLOPING MACHINES STAY PUT WITHOUT BOLTS

when mounted on NYB&P's

Gilmer SHOCK PADS



SAVE FLOORS . . . SAVE MACHINE DOWN-TIME!

UNTIL it was mounted on Gilmer Shock Pads more than a year ago, the shaper shown above used to shear its 5/8" mounting bolts every few months. This meant drilling out the sheared bolts, sinking new ones and resetting this heavy machine . . . all on *overtime,* since the shaper could not be spared during regular working hours.

The local NYB&P Distributor recommended mounting the shaper on 3/8"-thick Gilmer Shock Pads firmly attached to both the floor and the machine's base by means of Gilmer Shock Pad Adhesive, *without bolts.* Installation required less than two hours. Since the adhesive dries overnight, the shaper was ready for use the next morning . . . and has stayed put ever since!

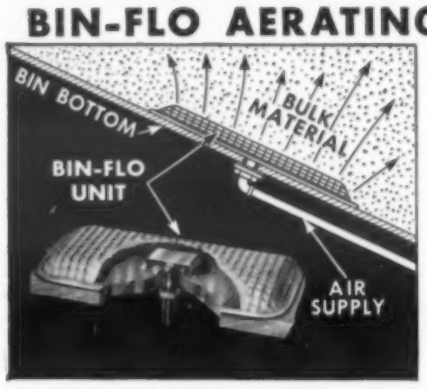
Now, ten other machines in this plant have been mounted on Gilmer Shock Pads, facilitating mounting and relocating and materially reducing the noise and vibration formerly transmitted to the floors by these machines.

Gilmer Shock Pads are molded of neoprene in five thicknesses, providing for static loads up to 7 tons per square foot. They are highly resistant to oil, heat, water and cleaning compounds and do not harden or compact in use. Available from your NYB&P distributor in cut pads or in rolls. Gilmer Adhesive bonds firmly to wood, concrete or metal.

NYB&P NEW YORK BELTING & PACKING CO. America's Oldest Manufacturer of Industrial Rubber Products

For more details circle **NED-666 H4** on enclosed inquiry slip

BIN-FLO AERATING UNIT



Provides Steady Flow of Dry, Finely Ground Materials which tend to bridge in storage. Uses only small amount low-pressure air.

BIN-DICATOR BIN LEVEL INDICATOR

For All Bulk Materials

signals change in level; automatically starts and stops filling and emptying equipment.

THE BIN-DICATOR CO.
13946-A Kercheval • Detroit 15, Mich.

NEW DETAIL DATA BOOK FREE

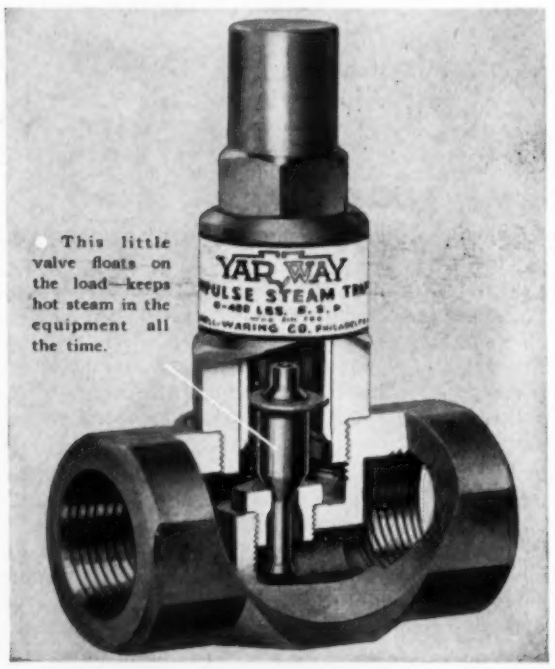
For more details circle NED-667 H4 on enclosed inquiry slip

THIS LITTLE VALVE CAN SAVE YOU MONEY

Your steam-heated equipment can turn out more production because of this little stainless steel valve.

It is the only moving part in a Yarway Impulse Steam Trap, and *it floats on the condensate load*. When steam is turned on, the little valve opens wide . . . discharges condensate and air *continuously* and brings the equipment *to production temperature in the shortest possible time*. After that, it passes, with a pulsating action, all condensate as it forms—*keeps a maximum, steady temperature in the equipment*.

Result to you—more production per day.



This little valve floats on the load—keeps hot steam in the equipment all the time.

Other Yarway Impulse Steam Trap advantages—small size, low initial cost, easy installation, low maintenance, stainless steel construction, and quick availability from over 200 local industrial distributors.

Over 900,000 Yarways have been sold to nearly all industries. Write for free Yarway Trap Book T-1740.

YARNALL-WARING COMPANY
131 Mermaid Ave., Philadelphia 18, Pa.

YARWAY impulse steam trap

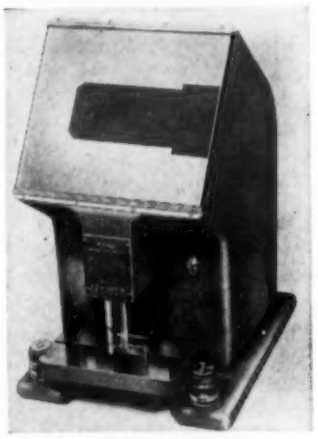
For more details circle NED-668 H4 on enclosed inquiry slip

HYDRAULIC PUMPING UNIT
comprises rams, reservoir and pump

Packaged hand-operated hydraulic unit can be operated in any position and has a 2000-lb capacity. It consists of two 17-in. rams, hand pump and 1-quart capacity reservoir. Lift is 16 in. Price is $22.00. Other capacities are available to order. Made by **Anco Screw Products**, Dept. N, 13741 E. Nine Mile Rd., East Detroit, Mich.

For more details circle NED-669 H4 on enclosed inquiry slip

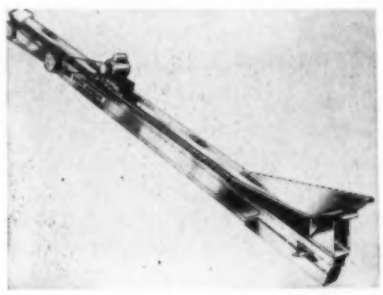
SMALL PARTS COMPARATOR
checks parts against drawing



Exclusively designed for production inspection, model C small parts comparator is an optical instrument which checks magnified part contour against an enlarged drawing. Horizontal work stage and vertical light beam permit many parts to be laid flat on the stage without holding fixtures. Screen and stage are positioned so that they are in line with operator's hand and vision for comfort and speed. Light source is built into the back of the instrument to keep heat away from the operator, and lenses give erect unreversed image. Portable instrument, which can be used for delicate assembly operations, is available with either 20, 25, 31¼ or 62½-X fixed magnification lens. **George Scherr Optical Tools Inc.**, Dept. NED, 200 Lafayette St., New York 12, N. Y.

For more details circle NED-670 H4 on enclosed inquiry slip

LIGHTWEIGHT BULK CONVEYOR
capacity up to 24 tons per hour



Either a rubber belt or steel chain and plow-contour rubber flights can be specified for Model 600 Handy-Handler lightweight bulk conveyor for loading and unloading trucks and cars at warehouses, storage bins or processing plants. It handles such materials as sawdust, salt, starch powders, wetting agents, food scraps and peat. In test runs handling coal, capacity of rubber belt model operating at 450 fpm ranged up to 24 tons per hour. Conveyors are made in 16-ft lengths. Extension sections are available to increase rubber or neoprene belt models to 20 ft and chain models to 28 ft. Replaceable wear strips in trough increase unit life. Made by **Belt Corp.**, 7500 Stahl Rd., Orient, O.

For more details circle NED-671 H4 on enclosed inquiry slip

INDICATOR LIGHTS
slide base type are easy to replace

Series of pilot light assemblies is designed to employ any telephone type incandescent bulbs having slide bases. Lamps can be replaced without tools. Screw or friction fitted caps have flat or convex lenses of ⅜ or ½-in. diameter. Wide angle visibility cap is also available. Back projection is kept to minimum for easy mounting in shallow panels. Mounting requires only a single 9/16-in. hole and adjacent units can be placed as close as ¾-in. center-to-center. Solder or screw terminals are available. Made by **Dialight Corp.**, 64 Stewart Ave., Brooklyn 37, N. Y.

For more details circle NED-672 H4 on enclosed inquiry slip

MARSHALLTOWN

ROTARY THROATLESS SHEARS

Capacities from 18 Gauge to ½"
Cuts any SIZE . . . any SHAPE

America's finest for every cutting job—straight, irregular or circular patterns.

Speedy—up to 6 ft. per minute. Efficient, easy to operate.

Built for extra heavy duty use. High grade tool steel cutters.

Write today for details and prices.

MARSHALLTOWN MFG. CO., Marshalltown 2, Iowa

For more details circle NED-673 H4 on enclosed inquiry slip

READ BOTH CURRENT AND VOLTAGE
At a FAST CLIP!

with the **COLUMBIA**

$57.50 With Voltage Leads and Carrying Case

TYPE AC-1 VOLT-AMMETER

Ampere readings are taken in a few seconds with the Columbia Clamp-Type Volt-Ammeter. With one hand you can open jaws, set range switch and encircle conductor. No breaking of circuit or insulation required. Safety plug-in leads are provided for quick voltage readings. Measures up to 600 amperes and 600 volts alternating current.

Handiest precision instrument of its type. Light weight—fits easily into pocket. Insulated jaws accommodate bare conductors or insulated cables up to 1½" diameter or bus bars up to 2" x ½". Convenient switch enables operator to select the following A.C. ranges: 0/12/60/120/600 amperes; 0/150/600 volts. The Type AC-1 is the latest addition to the line of Columbia instruments having an established reputation of highest quality and dependability.

Write for descriptive Bulletin AC-25

COLUMBIA ELECTRIC MFG. CO. 4525 Hamilton Ave. Cleveland 14, Ohio

For more details circle NED-674 H4 on enclosed inquiry slip

PALLETIZE WITH . . .

SWIFT'S PALLETITE ADHESIVES

- RESISTS HORIZONTAL SHIFTING
- POPS CLEAN ON VERTICAL PULL
- ONE GALLON DOES A CARLOAD!

• Palletizing or unit loading of bags or cartons is good insurance for safe, sound arrival of your merchandise. It speeds loading and unloading, reduces handling and demurrage costs — facilitates inventory and permits better use of warehouse space.

Swift has a versatile team of Palletizing adhesives that are ready, and economical, to use. *All* are non-skid and moisture resistant; one of them probably can help you save *real* money in your shipping department.

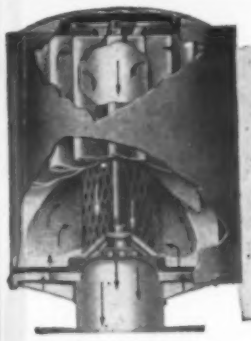
Write for information, today!

Call Swift for ADHESIVES

SWIFT & COMPANY
ADHESIVES PRODUCTS DEPT.
4115 PACKERS AVE.
CHICAGO 9

Another of Swift's Products for Industry

For more details circle NED-675 H4 on enclosed inquiry slip



MODEL D Intake Filter

STAYNEW DRY TYPE INTAKE FILTERS NEED NO SERVICING!

Only Staynew Intake Filters have the ability to remove air-borne particles without the necessity of viscous filter aids. The *dry-type* filtering medium becomes even more efficient as it accumulates dust. Resistance increases very slowly with use. Staynew filters frequently operate two or more years without attention. When cleaning is indicated, a brush or simple vacuum tool is all you need. There are no oil reservoirs to clean and refill—no oil coatings to renew.

Write today for Intake Filter Bulletin 100

Representatives in principal cities

DOLLINGER PROTECTO-MOTOR STAYNEW FILTERS

DOLLINGER CORPORATION
49 Centre Park • Rochester 3, N. Y.

ALL TYPES OF FILTERS FOR EVERY INDUSTRIAL NEED

For more details circle **NED-676 H4** on enclosed inquiry slip

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what National Vulcanized Fibre, of course! A curious fact about this wonder material is that for many mechanical purposes it is better and more durable than metal.

material But that's not all! National Vulcanized Fibre is a more versatile performer than a one-man band.

lasts . . . It's light in weight, strong, tough, hard as bone or soft as wet rawhide (as you prefer), resilient, wears like iron. It's the ideal electrical insulating material.

and lasts . . . It can be machined to close tolerances—can be bent, formed, drawn, swaged. No other material possesses all of its electrical and mechanical characteristics.

and Used profitably in thousands of applications and in many industries, National Vulcanized Fibre is the one material most likely to fit your own fabrication needs.

lasts?

Why not let us help you? Glad to send a descriptive catalog . . . or give first-hand advice. Write to address below, Dept. J-8.

• *National also manufactures Phenolite Laminated Plastic, Peerless Insulation, Vul-Cot Waste Baskets, Materials Handling Equipment and Textile Bobbins.*

NATIONAL VULCANIZED FIBRE CO.
WILMINGTON 99, DELAWARE
FIRST—IN MAKING THE MOST OF LAMINATED PLASTICS

For more details circle **NED-677 H4** on enclosed inquiry slip

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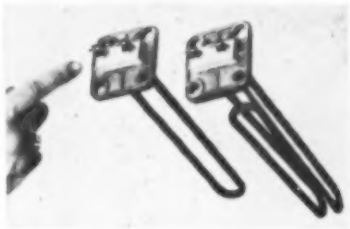
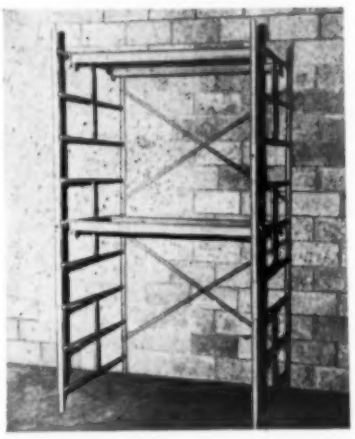
IMMERSION HEATERS
single and double flange-type units



Designed to operate on either direct or alternating current at 115 or 230 v, single and double flange heaters have been added to Calrod line. They can be used in water baths, cleaning tanks, stills, sterilizers and similar equipment. Heaters have a high watt density and a silicone seal and porcelain insulator to protect against vapors and liquids and provide electrical insulation. They are suitable for working pressures up to 125 psi and meet ASME low-pressure boiler specifications. Made by **General Electric Co.**, Schenectady 5, N. Y.

For more details circle **NED-678 H4** on enclosed inquiry slip

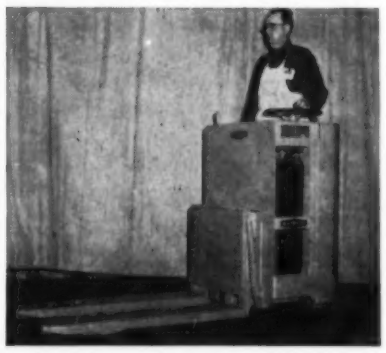
PALLET-RACK SYSTEM
for use in restricted areas



Simple pallet-rack system is built around basic tubular steel frame with shelving bars and connectors. It simplifies problem of storing loaded pallets in restricted space, since it can be erected as high as desired, with any desired spacing and length. Each section is independently adjustable. Height between shelves can be any multiple of 1 ft. Made by **Sharon Steel Corp.**, Brainard Steel Div., 3100 Griswold St., Warren, O.

For more details circle **NED-679 H4** on enclosed inquiry slip

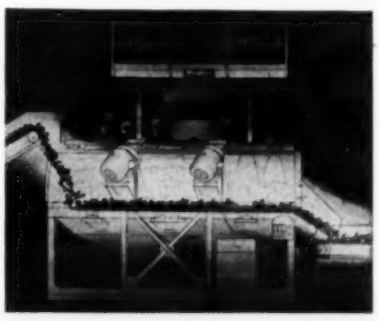
LOW LIFT PALLET TRUCK
features eight 3¼-in. load wheels



Eight load wheels arranged in dual, tandem fashion are feature of this narrow aisle, rider-type electric low lift pallet truck. Wheels have diameter of 3¼ in. and 2¼-in. face, permitting entry of truck forks between top and bottom pallet boards. They are articulated for travel over uneven floors. Wheel supporting levers are arranged so that wheels lift almost vertically. Bottom openings of most pallets are ample for this arrangement even though pallets are designed for trucks with single wheels. Made by **Raymond Corp.**, 41-123 Madison St., Greene, N. Y.

For more details circle **NED-680 H4** on enclosed inquiry slip

CONTINUOUS BLAST CLEANERS
barrel type units made in five sizes



Installations requiring a maximum amount of automatic blast cleaning are typical applications of type GO continuous flow Rotoblast cleaning barrels. Units are made in 48, 54 and 72-in. drum diameters with cleaning capacities of 50 to 400 cu ft of gray iron castings or 30 to 250 cu ft. of forgings per hour. Maximum work dimensions which can be cleaned range from 11 to 26 in. All abrasive is reclaimed before cleaned castings or forgings are discharged from the barrel, either onto a conveyor or into tote boxes. Reclaiming system cleans the abrasive for re-use and discards all fines and other refuse. Illustration is an artist's visualization of a type GO unit. Made by **Pangborn Corp.**, 140 Pangborn Blvd., Hagerstown, Md.

For more details circle **NED-681 H4** on enclosed inquiry slip

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Electrically-Controlled Super Speed AIR CYLINDER

Six to ten times faster than conventional air cylinders, the Bellows Super-Speed Air Motor develops tremendous speed and power from normal air pressure. At 100 lbs. air, power is great enough to punch ½" dia. hole through 1/16" thick mild steel. Ideal for staking, riveting, forming, swedging, stamping or punching.

The Super-Speed Air Motor is a complete power unit with built-in low voltage Electroaire directional valve and speed regulators. (Also available with manually controlled valve.) Only one air connection needed.

Write for Bulletin 1163 today.
Address: Dept. NED-854
The Bellows Co., Akron 9, Ohio.

2½" BORE • Stroke Lengths 2½" 4", 6", 9", 12" • Seven Mounting Styles

The Bellows Co. Akron 9, Ohio

1214

For more details circle **NED-682 H4** on enclosed inquiry slip

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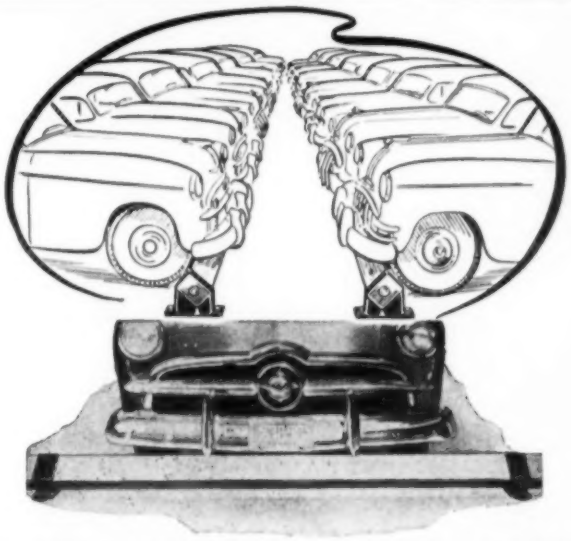

SALIENT FEATURES OF HAR-BAR BARRIERS

1. High enough to stop your car.
2. Low enough to clear your bumper guards.
3. Barrier is above ground — no drainage problem.
4. Barrier is above ground — no rotting of wood.
5. Automatically spaces your cars.
6. Follows contour of your ground.
7. Easily installed — just line up and drive the anchor pins.
8. Easily moved — just pull the anchor pins.
9. Easy to clean under.
10. Easy to maintain.
11. Installed on any kind of surface — black top, cement, macadam, gravel or cinders.
12. It really dresses up your parking lot.
13. You always stop against your tire — no shock.
14. Castings are non-rusting aluminum alloy.

Send us a plot plan of your parking lot—we do the engineering free.

HARRIS-BARRIER INC. 5407 N. PENNSYLVANIA STREET INDIANAPOLIS 5 - INDIANA

For more details circle **NED-683 H4** on enclosed inquiry slip

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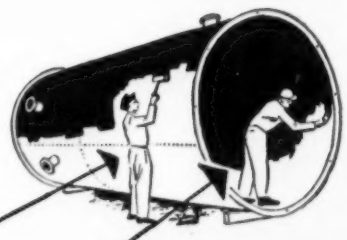
GACO has the two correct approaches to your corrosion problems



N-700*
Maintenance Coating
Protects against ALL FUMES

N-200-1
Heavy duty Liquid Lining
means peak IMMERSION SERVICE

Nothing else protects like GACO Neoprene —real rubber in a can.

GACO authorized Neoprene Application Shops. For your *additional* service completely equipped shops and trained personnel are located in every large industrial center to apply GACO Neoprene to your tanks and other equipment.

*Patent applied for.

Send me all the facts about genuine Neoprene Corrosion Protection.
Name _____
Company _____
Address _____

GATES ENGINEERING COMPANY
100 S. West St. • Wilmington, Delaware
The pioneer maker of Neoprene protective coatings and linings. N 8

For more details circle **NED-684 H4** on enclosed inquiry slip

RUBBER ENGINEERING **BRAINS**

Primarily, ACUSHNET sells rubber engineering "brains"—specialized, collective engineering skill that produces the solution to problem jobs constantly confronting users of precision molded rubber parts.

ACUSHNET accomplishments in this specialized field of precision production are widely recognized throughout industry. Our engineers will gladly study your prints and recommend stocks with properties to meet specified conditions or work with you in the initial stages of your designs.

Acushnet PROCESS COMPANY

Send for your copy of the Acushnet Rubber Handbook.

Address correspondence to 782 Belleville Ave., New Bedford, Mass.

For more details circle NED-685 H4 on enclosed inquiry slip

Big Fan Value

Hunter *Direct-Drive* **INDUSTRIAL FAN**

For Sidewall . Penthouse . Spot Cooling Installations

High-priced features at lowest cost

- Direct drive reduces maintenance
- Square steel frame forms easily installed mounting panel
- Totally enclosed, direct drive ball-bearing motor
- Streamlined air inlet 15% to 18% more efficient
- Powerful—effective up to ½" static pressure
- Automatic shutters to fit all sizes

CLIP AND MAIL NOW FOR COMPLETE DATA

Hunter Fan and Ventilating Company
373 S. Front St., Memphis 2, Tenn.

Send complete information on Hunter Industrial Fan to:

Name.....

Address.....

.....

For more details circle NED-686 H4 on enclosed inquiry slip

CAN CONVEYOR
one-way variable speed unit

Cans and similar items with rimmed bottoms can be conveyed through any desired path at speeds ranging from 0 to 12 fpm with Monoflo conveyor. Loading or unloading can be at any point. Cans are supported during traveling on a metal track and are propelled by a flexible rotating Monoflo cable. One-way unit requires no idle return loop. Conveying may be through inspection, ovens, coolers, washers, gamma radiation and other processes requiring slow speed movement. Conveyor is available in fixed or adjustable widths for handling cans of any size. Standard packaged drive units for fixed or variable speeds are available. Made by **M-H Standard Co.,** 513 Communipaw Ave., Jersey City 4, N. J.

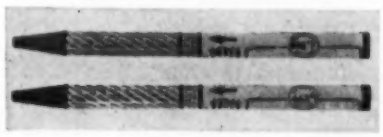
For more details circle NED-687 H4 on enclosed inquiry slip

SIMPLIFIED STEEL SHELVING
units are easily made up or altered

Unitized Flexi steel shelving is made up of complete individual units which can be moved independently. Shelves within units can be moved or altered without tools and without disturbing other shelves. Units are easy to make up, knock down or alter. Both open and closed styles are available, the open having a heavy gage, shaped post for added strength. Various accessories are available, including extra bracing for heavy loads, shelf boxes for small items, dividers, doors and partitions. Shelves are available in 36 and 42 in. widths, 9, 12, 18 and 24 in. depths and 39, 87, 99 and 123 in. heights. Made by **Borroughs Mfg. Co.,** 3011 N. Burdick St., Kalamazoo, Mich.

For more details circle NED-688 H4 on enclosed inquiry slip

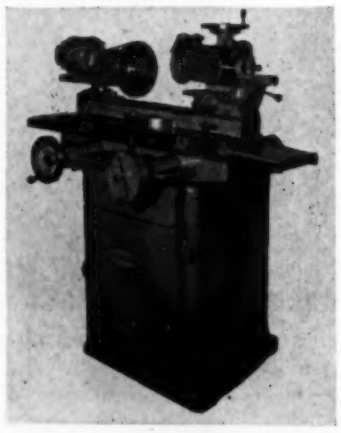
TEMPERATURE INDICATING CRAYONS
now available for 463 and 488° F



Newest addition to line of Tempilstik temperature indicating crayons are types signalling 463 and 488° F. These crayons are now available in 12½° F intervals from 113 to 500° F, in 25-degree steps from 500 to 550° F and in 50-degree increments from 550 to 2000° F. Made by **Tempil Corp.,** Dept. A, 132 W. 22nd St., New York 11, N. Y.

For more details circle NED-689 H4 on enclosed inquiry slip

TOOL & CUTTER GRINDER
incorporates antifriction table



Controls on improved model G-2 Sterling tool and cutter grinder are operated easily from either side or front of the machine. Antifriction table has two travel speeds. Raising and lowering mechanism and infeed mechanism are extremely accurate. Grinder has a 10¾-in. swing over the table, 27 in. between centers and 18 in. of table travel. Wheel head is equipped with an Excello 1-hp, 3450-rpm motorized spindle. Wheel head swivels 180 degrees in either direction. Plain or universal models and line of Sterling grinding fixtures are available. Made by **McDonough Mfg. Co.,** Dept. N, 1550 Galloway St., Eau Claire, Wis.

For more details circle NED-690 H4 on enclosed inquiry slip

Brady Pumps

Designed and Built

We welcome your pump problems and inquiries. Brady specializes in the design and manufacture of small Centrifugal Pumps . . . used as original equipment by leading manufacturers in Air Conditioning, Refrigeration, Dairy, Machine Tool and many other Industries.

for your Specific job

Write, phone or wire

Brady CORPORATION

1005 East 18th Street Muncie, Indiana

For more details circle NED-691 H4 on enclosed inquiry slip

GOT A WEB GUIDING PROBLEM?

ASKANIA EDGE POSITION CONTROL
for every web guiding job!

12 page Bulletin describes this simple, easy to install, easy to maintain system. Only a breath of air touches the controlled material—yet speed and force available for correction are practically unlimited. Write for your copy of Bulletin 161.

ASKANIA REGULATOR COMPANY
258 E. Ontario Street, Chicago 11, Illinois
Subsidiary of General Precision Equipment Corp.

For more details circle NED-692 H4 on enclosed inquiry slip

SPEEDY is the word for SPEEDEX, the new Murex contact electrode. Iron powder in its heavy coating improves arc action and supplements the deposit from the core wire to give amazingly high deposition rates. With SPEEDEX you can increase welding output and cut deeply into time and labor costs (by far the major expense items in any welding operation).

SPEEDIER than any conventional mild steel electrode — twice as fast as an E-6012 rod — SPEEDEX provides deposition rates up to nearly 10 lbs. an hour with a 3/16" electrode, almost 15 lbs. an hour with a ¼" electrode. This means you can make single pass fillets at unheard of travel rates — 15 inches a minute or better.

SPEEDEX is an operators' rod too. They like its smooth, easy arc action — with either the drag or the open arc technique. It gives them no trouble with sidewall wash or undercutting. Its slag is almost self-removing. The finely rippled deposit has excellent surface appearance. And, under the surface, SPEEDEX welds are strong, sound and ductile — 85,000 to 90,000 psi ultimate strength with 73,000 to 78,000 yield and 15% to 25% elongation in 2 inches.

MUREX® Electrodes • Arc Welders • Accessories

METAL & THERMIT CORPORATION 100 EAST 42nd STREET NEW YORK 17, N. Y.

For more details circle NED-693 H4 on enclosed inquiry slip

Before your floors get older

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Floors causing you trouble . . . costing you money?

Get the facts about Tuff-Tex* Greaseproof Industrial Tile.

It combines greaseproofness, durability, resiliency and pleasant colors. With Tuff-Tex, plant interiors and even machine areas can have easy-to-clean, bright, colorful floors which are highly resistant to greases, oils, moisture and fire.

Tuff-Tex withstands heavy plant traffic and rolling friction. Provides a safe, sure-walking surface.

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THE TILE-TEX DIVISION, The Flintkote Company, 1234 McKinley Street, Chicago Heights, Illinois

Tile-Tex—Pioneer Division, The Flintkote Company, P. O. Box 2218, Terminal Annex, Los Angeles 54, California

The Flintkote Company of Canada, Ltd., 30th Street, Long Branch, Toronto, Canada

TUFF-TEX GREASEPROOF INDUSTRIAL TILE

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1ST IN METAL TOOL BOXES

CASES—CHESTS—CABINETS

Here are the world's finest metal boxes. They're better constructed—better looking. Known for their fine materials—workmanship—attractive design. These boxes outlook—outlast—outsell competition. Write for FREE book, including complete information.

Waterloo

VALVE SPRING COMPRESSOR CO.
WATERLOO, IOWA

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Headquarters for low-impedance *high vacuum valves*

The *CVC* pneumatically-driven, solenoid-operated high vacuum valve shown here is for remote control of high vacuum pumping systems.

If your need is for hand-operated valves, or AC and DC solenoid-operated valves, or combination valves and water-cooled baffles, *CVC* can furnish them, too.

CVC high vacuum valves are designed for minimum impedance to the gas flow. They're simple to operate, easy to maintain, and trouble-free. All are guaranteed leak-free and capable of maintaining your lowest commercially feasible vacuum.

Whatever your need, chances are *CVC* has the valve in stock. Our nearest field representative would like to help you solve your vacuum valve applications, or other high vacuum problems.

Write Consolidated Vacuum Corporation, Rochester 3, N. Y. (a subsidiary of Consolidated Engineering Corporation, Pasadena, Calif.)

CVC

Consolidated Vacuum Corporation
Rochester 3, N. Y.

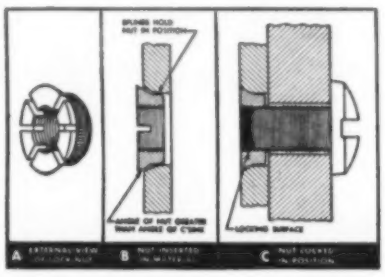
designers and manufacturers of high vacuum equipment

SALES OFFICES: New York, N.Y., Chicago, Ill., Boston, Mass., Camden, N.J., Palo Alto, Calif.

▲ For more details circle NED-696 H4 on enclosed inquiry slip ▲

FLUSH-MOUNTED LOCKNUT in all metals and standard threads

Flush mounting is effected by this one-piece lock nut which will provide strong threads in soft metal members or can be used as threaded insert to replace stripped threads. Nut is slotted cone shaped at one end and splined cylinder on other (view A). It is designed to be inserted in a countersunk hole. Nut, partially or completely seated (view B), is held in position by force-fitted splines. Locking action is produced by pressure of sector threads forced against bolt by interference of countersinks (view C). Pre-positioning of nut allows blind assembly. Made in all metals and standard thread specifications by **Allmetal Screw Products Co.,** 835 Stewart Ave., Garden City, L. I., N. Y.



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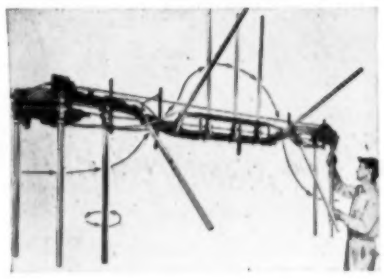
PARTS DIPPING MECHANISM aids in producing even finish



Parts or products dipped into paint, plastic, latex, lead, or zinc are assured of an even finish with use of DipAid unit for use with any ¼ or ⅜-in. Bush-Lock cable conveyor. Positioned in conveyor system immediately after dip tank, unit consists of two spiral 180-degree twists in trolley rail, plus accessory buffer strips and side guide rails. Product emerging from dip tank is swung through 180-degree arc then returned to normal position by twists. At same time, horizontally-mounted wheel engages side rail to make part rotate along its own axis. These motions minimize running, streaking, sagging or beading of finish. Special hooks to hold any product are available. Made by **E. W. Buschman Co.,** 4482 Clifton Ave., Cincinnati 32, O.

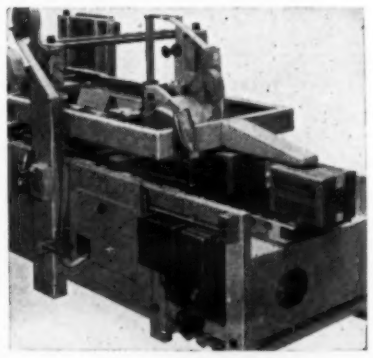
▲ For more details circle NED-698 H4 on enclosed inquiry slip ▲

GRINDING COOLANT can be used in hardest water

Water-soluble Triple C coolant is suitable for all grinding operations. It can be added directly to water in the grinder and dissolves in as little as 2 minutes. It is compatible with heat-treating salts and maintains its properties even in hardest water. Filtration equipment operation is unaffected by its use, and it is foamless, odorless and dissipates heat quickly. Solutions do not emulsify oils nor affect lubricated parts of machines. After use, it can be thrown directly into sewers or streams without hazard of contamination. It is available in 9, 50 and 150-lb containers. Made by **Motch & Merryweather Machinery Co.,** Cutting Tool Mfg. Div., 1250-N E. 222nd St., Cleveland 17, O.

▲ For more details circle NED-699 H4 on enclosed inquiry slip ▲

CASE GLUING & TAPING MACHINE all operations done in one pass



Automatic gluing and taping of corrugated or cardboard containers is performed by model F-24 case sealing machine. Tops and bottoms are closed with dust-tight double-seal simultaneously. Standard machine adjusts quickly for carton sizes of 10 to 22.4 in. long, 5.1 to 13.8 in. wide and 4.9 to 17.7 in. high. Adjustable glue rollers apply glue to small part or entire area of flaps. Each tape unit holds two 1500-ft rolls of gummed tape. Chain driven conveyor with transverse feeder bars pulls cartons through sealing section. Unit is powered by 2-hp motor. Made by **Clybourn Machine Corp.,** 6483N N. Avondale Ave., Chicago 31, Ill.

▲ For more details circle NED-700 H4 on enclosed inquiry slip ▲

These 2 hands can't be replaced
Give them the best protection . . .

JOMAC WORK GLOVES

Your workers' hands are your best tool—deserve the best protection. And Jomac Gloves, with the twisted loop construction, provide it. Thousands of springy loops in each glove cushion the hands against rough surfaces, sharp edges, and bruising shocks—prevent injuries that mean lost time and money. Send for our catalog. Ask about a trial order. JOMAC INC., (*formerly C. Walker Jones Co.*) Dept. G, Phila. 38, Pa. *Plants in Phila., Pa. and Warsaw, Ind.*

JOMAC
INDUSTRIAL GLOVES
outwear ordinary gloves by 900%

▲ For more details circle NED-701 H4 on enclosed inquiry slip ▲

Build it yourself . . .

ONE-MINUTE DEGREASING BATH

Try this speedy new *low-cost* way to clean and degrease castings, gears, small parts.

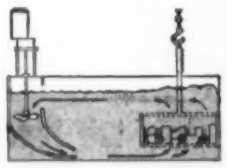
Just lower pieces to be cleaned or degreased into the solvent tank. The LIGHTNIN Mixer does the work—whisks solvent through and around parts. Cleans them slick as a whistle—in *one minute*. Twice as fast as hand dipping, and much cheaper.

All you need is your own shallow tank for solvent, fitted with a LIGHTNIN Mixer, easily installed per drawings we furnish you.

Fully guaranteed to do the job efficiently, or your money back.

Send today for illustrated LIGHTNIN Catalog B-103 and prices.

You take no risk when you specify LIGHTNIN Mixers for any fluid mixing operation in your plant. Thousands of LIGHTNINS are in use everywhere. Many in service 20 years and more.



GREASE OFF in 60 seconds. Solvent rushes through and around parts, driven by LIGHTNIN Mixer. Flow is controlled by simple baffle plates in tank.

MIX FLUIDS FAST in any open tank or container, with a LIGHTNIN Portable Mixer. Thirty models, ⅛ to 3 HP. Send for Catalog B-108.

FOR BIG MIXING JOBS . . . turbine and paddle mixers for open or closed tanks. Sizes 1 to 500 HP. Send for Catalog B-102.

Lightnin® Mixers

MIXING EQUIPMENT Co., Inc.
165-h Mt. Read Blvd., Rochester 11, N. Y.

In Canada: Greey Mixing Equipment, Ltd., 100 Miranda Ave., Toronto 10, Ont.

▲ For more details circle NED-702 H4 on enclosed inquiry slip ▲

SHEAR SHEET METAL *faster*—

Frederick FRECUT FOOT SHEAR

Model No. 1836

Frecut features a wider holddown, with wider feet, to insure more accurate shearing. Correct leverage means capacity shearing with less operator fatigue. Two gauges . . . front and rear . . . plus an angle gauge, are standard equipment on the Frederick Frecut.

Rugged and durable, the Frecut is priced for factory or job shop operation. Proved in operation by daily use in many plants. Ready for prompt shipment. Write direct for illustrated, descriptive literature and prices.

BUYING DATA

Cap.—18 ga mild steel
Cutting length.....36"
Width of Bed.....14"
Overall height....41"

FREDERICK IRON & STEEL, INC.
MACHINERY DIVISION
FREDERICK *Established 1790* MARYLAND

PRODUCERS OF CENTRIFUGAL PUMPS
WRECKING BALLS • MUNICIPAL INDUSTRIAL CASTINGS

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SEL-LOK SPRING PINS *won't vibrate loose*

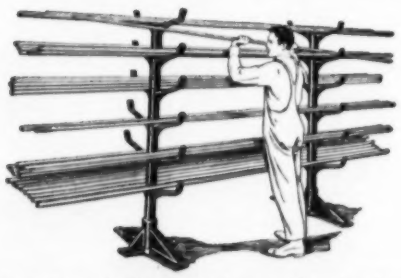
Use them as hinge pins, use them to fasten gears, pulleys and sheaves to steel shafting, use them to replace keys, keyways and cotter pins—they won't work loose. For complete information, write STANDARD PRESSED STEEL Co., Jenkintown 24, Pa.

Sel-lok spring pins are shock resistant and vibration proof • eliminate expensive reaming operations • replace tapered or grooved pins • easy to insert and remove • reusable • accurate in diameter and length • reduce installation costs • lighter in weight and as strong as a solid cold-rolled steel pin of the same diameter • available in a full range of lengths and diameters

SEL-LOK SPRING PIN DIVISION SPS
JENKINTOWN PENNSYLVANIA

▲ For more details circle NED-706 H4 on enclosed inquiry slip ▲

for EFFICIENT HANDLING and ORDERLY STORAGE



You save time, both in storing and in issuing, when you use Brown Sectional Racks. Open sides speed handling. Complete visibility permits quick selection to save waiting mechanics time.

Maximum flexibility in arrangement is possible because each Brown Rack is independent and self-contained, need not be bolted to floor. Easily relocated. Systemized storage with Brown Racks promotes good housekeeping, cleanliness.

All iron and steel construction, can't burn, bend, sag or warp. Never wear out.

Get these values now! Write for complete specifications and prices on wide range of models and sizes. Brown Engineering Co. 129 N. Third St., Reading, Pa.

BROWN QUICK-SERVE RACKS

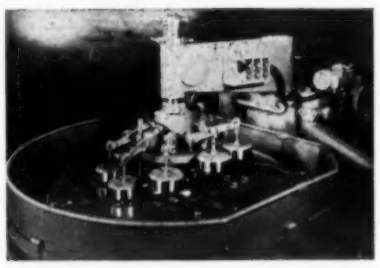
▲ For more details circle NED-707 H4 on enclosed inquiry slip ▲

WORK & SHEET METAL BENCH made with laminated maple top

Each laminated maple strip in top of this combination work and sheet metal bench is 2 in. wide and 2¼ in. thick. Strips are glued and reinforced with heavy concealed bolts to form a warp-resisting surface. Steel angle iron on front and rear edges provides a sharp edge for bending metals. Two cast iron stake plates are inserted flush with the top on each side. Type O legs are formed of welded steel sections. Three steel shelves are flanged front and rear. Machinists vises are available for the 60 x 40 x 32-in. and 96 x 40 x 32-in. benches. Made by **Industrial Bench & Equipment Mfg. Co.,** 98 South St., New Britain, Conn.

▲ For more details circle NED-708 H4 on enclosed inquiry slip ▲

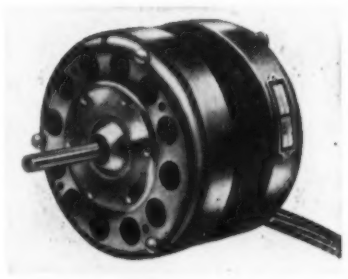
FLAT LAPPING MACHINE work is lapped in one pass



Semiautomatic feed is one feature of No. 36-F Hyprolap flat lapping machine for high production work. Bonded abrasive laps permit work to be completely lapped in one pass. Filtered coolant washes away grit. Lap is trued by a variable speed power-operated truing arm with diamond cutter without removing work holder. Pressure is automatically applied to parts to secure desired lapping action. Operator's function is to load and unload the machine and to true laps as necessary. Machine can be arranged for fully automatic continuous feed operation by addition of loading and unloading devices. Made by **Norton Co.,** 200 New Bond St., Worcester 6, Mass.

▲ For more details circle NED-709 H4 on enclosed inquiry slip ▲

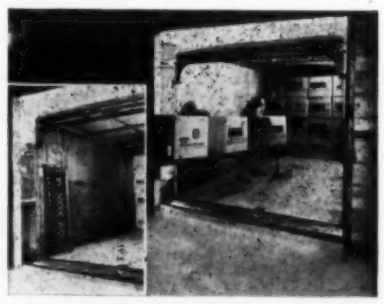
SHADED-POLE MOTOR for air conditioners, exhaust fans



Where quiet, continuous operation is required, as in room air conditioners and exhaust fans, type 600 six-pole shaded-pole motor is practical. Motor is available for 115 or 230 v, 60-cycle use, and has no-load speed of 1180 rpm and rated load speed of 1000 to 1050 rpm. It is available with ⅜ or ½-in. diameter shaft, single or double extension and with length or flats to specification. Extra large oil reservoir with felt packing affords long service life to sintered bronze, self-aligning bearings. Power range for continuous fan duty is ⅛ to 1/40-hp; for continuous mechanical duty, from 1/15 to 1/50-hp. Made by **Loyd Scruggs Co.,** Dept. F, Festus, Mo.

▲ For more details circle NED-710 H4 on enclosed inquiry slip ▲

TELESCOPING WHEEL CONVEYOR opens from 4 ft 4 in. to 10 ft 2 in.



One man can carry, set up and handle operation of model 75 Tel-O-Veyor, a 75-lb portable telescoping wheel conveyor that extends from 4 ft 4 in. to 10 ft 2 in. Conveyor opens to any length between limits without drop in level. It can be used in multiple or attached to existing conveyor line. Aisle cross-over and truck loading and unloading operations are typical applications. Operating surface is 12 in. wide. Unit has safety lock, carrying handle and adjustable stand which can be varied from 18 to 30 in. high. Made by **Jersey Sheet Metal Products, Inc.,** Associated Metal Fabricators Div., Dept. N, 18-20 Sebago St., Clifton, N. J.

▲ For more details circle NED-711 H4 on enclosed inquiry slip ▲

RESTORE GALVANIZING DAMAGED by WELDING

• *Quickly*
• *Permanently*
• *Economically*

with

AMCO galvanizing repair compound

● It takes only a simple operation to repair galvanized surfaces damaged or marred by welding. AMCO Galvanizing repair Compounds—stick or powder—provide a permanent coating equal to the original. And it's done without hurting the surrounding area. No special tools or skills are required.

AMCO Compounds provide fast, on-the-spot base metal protection. Meet U. S. Government Specifications.

Get the complete story. Write for descriptive literature.

AMERICAN SOLDER and FLUX CO.
Dept N
19th & WILLARD STS., PHILADELPHIA 40, PA.

▲ For more details circle NED-712 H4 on enclosed inquiry slip ▲

BEST CHOICE

Bendix Electric Fuel Pump is the outstanding choice for every operating condition!*

- Performance-proven
- Longer Life • No Pressure "Droop"
- Dependable Operation at −75°F.
- Improves Low Temperature Starting
- Built-in Pressure Release
- Eliminates Vapor Lock
- Delivers More Gallons per Hour
- Easy to Install • Easy to Service
- Low Power Requirements
- Economical Operation
- Light Weight • Compact
- Rugged • Tamper-proof

Learn more about this new and improved fuel pump. Write for descriptive folder and specifications.

*REG. U.S. PAT. OFF.

ECLIPSE MACHINE DIVISION
ELMIRA, N. Y.

THE NAME MILLIONS TRUST Bendix AVIATION CORPORATION

Bendix* Electric Fuel Pump
Bendix* Folo-Thru Starter Drive Stromberg* Aeroquad Carburetor

▲ For more details circle NED-713 H4 on enclosed inquiry slip ▲

CAPCO Dock Covers completely enclose the space between car and building doorways protecting loading and unloading during bad weather...preventing accidents... insuring against loss of heat or refrigeration. 51 different models in any size for every loading problem.

CAPCO

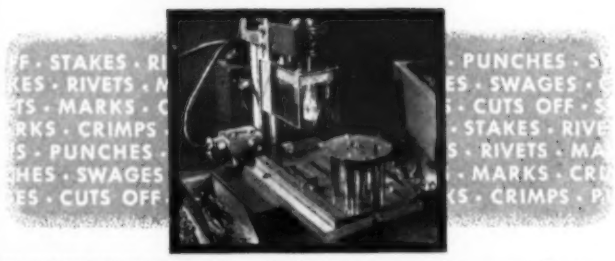
Write for literature and name of nearest distributor.

622-24 PROSPECT AVENUE • KANSAS CITY 24, MISSOURI

For more details circle NED-714 H4 on enclosed inquiry slip

ELECTROPUNCH SAVES TIME

for Telechron Clocks!



ELECTROPUNCH — the all-electric impact hammer, fastens front plates to Telechron clocks 575% faster! Here's how: — the assembly, after being positioned, is simply slipped under the ELECTROPUNCH, tripping a limit switch that automatically cycles the work stroke. Total time: 1.93 seconds — as compared to the 11.10 seconds previously required for fastening with a power-driven screwdriver.

Delivers impacts up to 10,000 lbs. — up to 125 blows per minute! Economical to buy, operate and maintain — adaptable to wide range of applications. Operable from 115 V., A.C. outlets.

Write — or phone BIgelow 4-6370 — for folder showing complete line of Black & Webster electric production tools.

BLACK & WEBSTER, INC.

Dept. 1, 445 Watertown Street, Newton 58, Mass.
Solenoid-operated Production Tools

For more details circle NED-715 H4 on enclosed inquiry slip

PROTECT YOUR HYDRAULIC SEALS with the IMPROVED

Here is a BETTER WAY to insure long life for cylinder rod packings, bearings, machine spindles, guide pins.

Seal-Guard's flexible bronze, knife-edge wiping rings mould themselves to the shaft contour . . . peel off dirt and grime . . . lift it entirely away from the shaft—no packing or crowding under.

- No chance of fouled bearings or packing.
- Can't damage shaft surfaces.
- Seal-Guards are available to fit rod diameters from ½ to 10 inches. Other sizes by special order.

Write for descriptive literature.

HYDRAULIC ACCESSORIES CO.
24301 Hoover Rd. Van Dyke, Mich.

For more details circle NED-716 H4 on enclosed inquiry slip

MANIFOLD-TYPE VALVES
designed for easy parts replacement

Three and four-way, two or three-position manifold-type Hi-Cyclic valves for air and oil or water hydraulic systems are designed for automation or other control set-ups. Construction allows rapid replacement of parts without disturbing piping or main mainfold block. Actuators include single solenoid, double solenoid, piloted, hand lever, fingertip lever, and cam roller mechanisms, with detent and spring load to center on three-position models. Sizes are 1/8, 1/4, 3/8 and 1/2-in. Solenoid coils can be removed without disturbing electrical circuit. Electrical valves are available for all common alternating or direct current voltages. Made by **Beckett-Harcum Co.**, 1139 Wayne Rd., Wilmington, O.

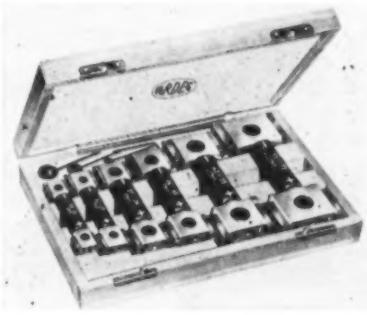
For more details circle NED-717 H4 on enclosed inquiry slip

INSULATING TAPE
seven colors for wire identification

Color identification of lead wires is facilitated by use of Bi-Seal self-bonding insulating tape, available in black, white, red, yellow, orange, green and blue colors. Made of polyethylene based compound, tape fuses into solid mass to create water-tight, permanent seal over splices and wire terminations. Elasticity and mechanical strength allow tape to be molded over complex shapes, and flexibility is retained at temperatures as low as −67° F. Fused layers are impossible to delaminate. Average dielectric strength is more than 1000 v per mil thickness. Made by **Bishop Mfg. Corp.**, 128 Factory St., Cedar Grove, N. J.

For more details circle NED-718 H4 on enclosed inquiry slip

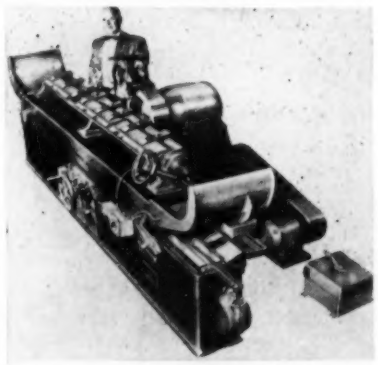
ADJUSTABLE PLUG GAGES
six sizes cover 0.708 to 2.835 in.



Any size hole from 0.708 to 2.835 in. can be accurately gaged with six adjustable Go and No Go gages. Gages are set by micrometer, indicator or gage block as required, and have long jaws to permit straight entry to holes. They will measure blind holes to their full depth. Gages can be locked and wax-sealed after setting to prevent tampering, and can be used to measure out-of-round conditions. They are equally suitable for production or inspection type work. Gages are available either in the set of six or individually, and are furnished in lined mahogany storage chests. Developed in Sweden, gages are made in this country by **Ardec Inc.**, Dept. G, P. O. Box 663, Media, Pa.

For more details circle NED-719 H4 on enclosed inquiry slip

MACHINE KNIFE GRINDERS
feature automatic clamping, timing



Air clamping device incorporated in NT and 220 series machine knife grinders provides instantaneous clamping of knife in grinding position. Operator merely aligns knife and presses button to begin grinding cycle. Clamping device evenly distributes clamping pressure along full length of knife. A slow bleeder valve maintains pressure in the system for up to 2 hours if air pressure should be shut off. Timer automatically stops the grinder after a predetermined grinding period and at end of the stroke. Automatic infeed operates in conjunction with the timing device and can be set within limits of 0.0005 to 0.005-in. grind per table cycle. Made by **Samuel C. Rogers & Co.**, 185-201 Dutton Ave., Buffalo 11, N. Y.

For more details circle NED-720 H4 on enclosed inquiry slip

. . a telephone booth that

Cuts outside noise 50%

the Hear Here
ACOUSTI-BOOTH
$100

Try it! . . you risk only shipping charges

Order an Acousti-Booth today . . if you're not completely satisfied, return it for a *full refund*. You pay only the shipping charges.

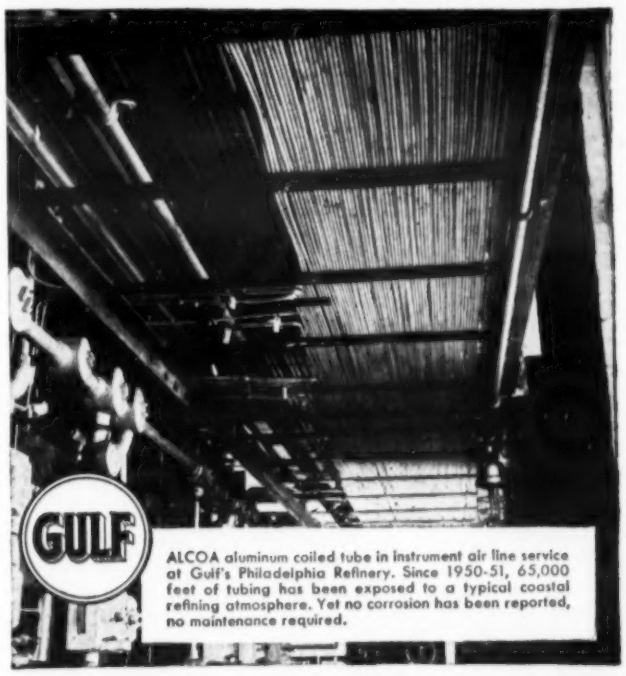
The walls of thick, sound absorbing material make telephoning like talking from a private office. And this Acousti-Booth takes less room than a large wall calendar. Attractive gray, hammered finish steel exterior.

$100 F.O.B. Chicago, Model 45. If you want light fixture, add $9.

Ask for Bulletin A-131

ACOUSTI-BOOTHS
Burgess-Manning Company, Architectural Products Div.
5970 Northwest Highway, Chicago 31, Ill.

For more details circle NED-721 H4 on enclosed inquiry slip



Gulf Oil Corporation cuts cost and corrosion with ALCOA UTILITUBE®

Like Gulf, you too can save from 30 per cent to 60 per cent in tube costs because ALCOA Utilitube costs from 30 per cent to 60 per cent *less* than copper. It has excellent on-the-job forming and flaring properties . . . is available in economical, long lengths up to 1,000 feet or more, depending on size. It stands up well under vibration . . . has high resistance to most industrial atmospheres and to many liquids and gases.

In petroleum service, Alcoa Utilitube will not form sludge or gum . . . will not discolor or contaminate the fluid it carries.

Use Alcoa Utilitube for:

- ★ Pneumatic control circuits
- ★ Gasoline and fuel oil for internal combustion engines
- ★ Lubricating oils for engines and machines
- ★ Fluids for hydraulic systems.

For complete details, write for the new booklet:
Alcoa Utilitube

ALUMINUM COMPANY OF AMERICA
1002-H Alcoa Building, Pittsburgh 19, Pa.

ALCOA ALUMINUM

ALUMINUM COMPANY OF AMERICA

For more details circle NED-722 H4 on enclosed inquiry slip

FREE... Latest Data on Problem-Solving

SET SCREWS

If you have puzzling set screw problems, check off below, the special type Setko Set Screws that seem to fit your need. Bulletins on these will be supplied.

SPECIAL TYPES

☐ Increased Holding Power NU-CUP Set Screws

☐ Hollow-Head Self-Locking IMPROVED ZIP-GRIP*

☐ Slotted-Head Self-Locking OFFSET Set Screws

REGULAR SET SCREWS

For prices and general set screw data check

☐ New COMPLETE CATALOG No. 19.

Write name and address in the margin of page, tear out and mail. Bulletins or catalog will be sent promptly . . . no charge or obligation.

Set Screw & Mfg. Co. *Pat. Pending

130 Main St., Bartlett, Ill. (Chicago Suburb)

We Specialize in Solving Puzzling Set Screw Problems

▲ For more details circle NED-723 H4 on enclosed inquiry slip ▲

RAYMOND

Hydraulic PALLET LIFT TRUCK

Capacities: 4000 or 6000 lbs.

AMERICA'S HEAVY DUTY Twins!

Hydraulic SKID LIFT TRUCK

Capacities 2500 lbs. 4000 lbs. 6000 lbs.

● IT'S A CINCH to handle heaviest pallet or skid loads with RAYMOND Hydraulic Lift Trucks! These husky trucks . . . built to deliver years of rugged wear . . . are truly America's heavy-duty twins.

● Both RAYMOND Trucks have powerful hydraulic assemblies to make load-lifting easy. Handles operate with long full strokes . . . or short strokes where space is limited. Handles are pressure-balanced to stay put in any position, won't fall when trucks are not in use.

● These trucks come with convenient finger-tip lowering . . . an exclusive RAYMOND feature. They're highly maneuverable, have full 360° turning radius for steering into or out of close quarters. Specially mounted, machine-faced wheels make 'em easy to pull over roughest floors and on upgrades.

The RAYMOND CORPORATION

4140 Madison St., Greene, N.Y.

Please send literature describing ☐ RAYMOND Skid Lift Trucks ☐ RAYMOND Pallet Lift Trucks ☐ RAYMOND Hydraulic Elevating Equipment Catalog.

NAME _____ TITLE _____

COMPANY _____

STREET _____

CITY _____ STATE _____

MAIL COUPON

▲ For more details circle NED-724 H4 on enclosed inquiry slip ▲

New Literature and Catalogs

Hydraulic Control Valves

Rivett Lathe & Grinder, Inc.—8-page illustrated catalog 260 describes sub-plate mounted solenoid-operated hydraulic valves. Rated for service up to 3000 psi, they are available in sizes from ¼ to 1½ in. with any of 14 piston designs. JIC diagrams illustrate flow circuits. Specifications and other data are given.

▲ For more details circle NED-725 H4 on enclosed inquiry slip ▲

Plug Valves

Homestead Valve Mfg. Co.—24-page reference book 39-5 illustrates full-port and venturi type lubricated plug valves. Sizes up to 14 in. and either self-sealed two-piece plug or one-piece plug designs are available. Dimensions, types of control, metals and lubricants are considered.

▲ For more details circle NED-726 H4 on enclosed inquiry slip ▲

Cold Finished Steel

Jones & Laughlin Steel Corp.—Heat treated cold finished steel is described in 8-page illustrated bulletin entitled "Electreat." Electric induction heating and quenching machine is used in manufacture of this stock. Typical mechanical properties of steel specimens with cross sectional hardnesses are shown in tabular form. Size and shape range available is indicated, and applications are discussed.

▲ For more details circle NED-727 H4 on enclosed inquiry slip ▲

Motor Starters

Electric Controller & Mfg. Co.—16-page illustrated bulletin 1062 shows motor starters having short circuit protection for 2250-5000-v systems. One type will safely interrupt a circuit from a bus of unlimited capacity. Standard, weatherproof and hazardous location enclosures are available. Various types of installations are pictured.

▲ For more details circle NED-728 H4 on enclosed inquiry slip ▲

Industrial Propellers

Columbian Bronze Corp.—"Industrial Propellers" is title of illustrated folder describing various types of propellers used in industry for mixing, pumping, aerating and agitating. Industries served range from ice-cream making to sewage processing. Designs, materials and sizes available are outlined.

▲ For more details circle NED-729 H4 on enclosed inquiry slip ▲

Transformers, Reactors, Filters

United Transformer Co.—28-page illustrated catalog and price list A gives data on a range of various types of transformers, reactors and filters. They are manufactured in hermetic and Fosterized designs to standard specifications. Magnetic amplifiers are also covered.

▲ For more details circle NED-730 H4 on enclosed inquiry slip ▲

Standardized Belt Conveyors

Barber-Greene Co.—Standard components designed for short conveyor range described and illustrated in bulletin 375 can be assembled to form belt conveyors from 8 to 44 ft long, in increments of 1 ft. Belt widths are 18, 24, and 30 in. Channel frame construction permits use in limited headroom. Capacities range from 50 to 480 tons per hour.

▲ For more details circle NED-731 H4 on enclosed inquiry slip ▲

Photographic Materials

Eastman Kodak Co.—Photographic materials and light filters for laboratory use are covered in catalog. Typical examples of products described are materials for photomicrography, for recording radiation, for spectrochemistry, for infrared and ultraviolet, for electron imagery, for attenuating light and for modifying spectral distribution.

▲ For more details circle NED-732 H4 on enclosed inquiry slip ▲

Jig & Fixture Components

Lodding Inc.—86-page illustrated catalog covers expanded line of jig and fixture components. Full-scale layouts of all fixtures are given. New products described include plain fixture keys, heavy duty jacks and ductile iron bar knobs and speed handles. New sizes available in other standard items such as screws, washers, clamp assemblies, studs and cams are also given.

▲ For more details circle NED-733 H4 on enclosed inquiry slip ▲

How Wire Cuts Costs!

Get this FREE Handbook

Practical designer's handbook shows how the cost of many products can be reduced by using wire. Simple redesigns replace castings, forgings, stampings, tubing and sheet steel components with less expensive welded wire and wire-and-strip assemblies. Handbook contains technical data—charts, tables, drawings, specifications, etc.—plus information on various types of production procedures. Write for your copy to:

WIRE GOODS Manufacturers

E.H. Titchener & Co.

79 CLINTON ST. BINGHAMTON, N. Y.

▲ For more details circle NED-734 H4 on enclosed inquiry slip ▲

ADD TO YOUR KNOWLEDGE . . . of Stress Rupture

New B&W Technical Data Card gives lots of stress rupture data on B&W Croloys (as well as medium carbon steel). Analysis, Heat Treatment, Test Temperatures and hours under stress.

It's all included in TDC-153A—That's what you send for.

TA-4070(LP)

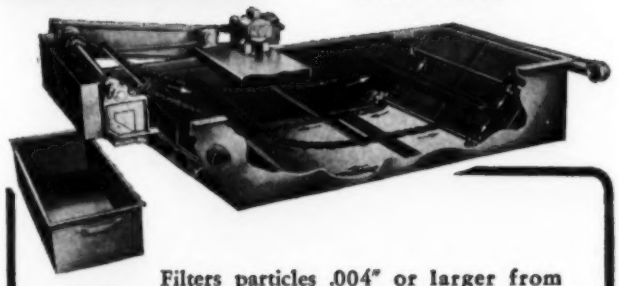
THE BABCOCK & WILCOX COMPANY
TUBULAR PRODUCTS DIVISION

Beaver Falls, Pa.—Seamless Tubing; Welded Stainless Steel Tubing
Alliance, Ohio—Welded Carbon Steel Tubing

▲ For more details circle NED-735 H4 on enclosed inquiry slip ▲

New! Filters Small Solids...

Delpark Settling and Filter SYSTEM



Filters particles .004" or larger from liquids of varying viscosity containing solids of different particle sizes and weights.

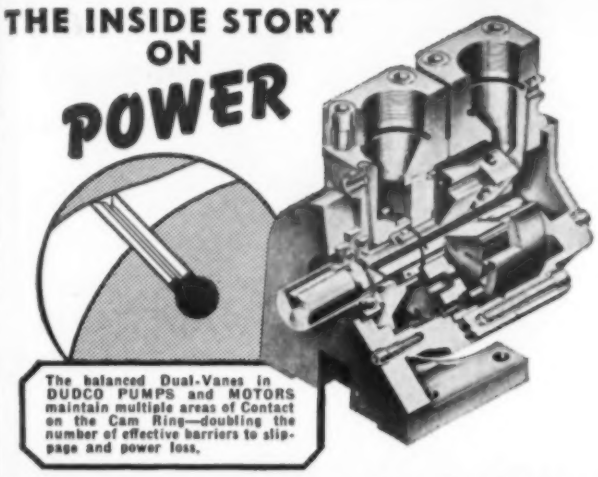
Power-driven expeller flights, solid and of special bristle brushes, sweep solids from the screen and settling area up a ramp at the opposite end. A special cleaning device removes the solids from the flights before their return to the filter. Screens easily removed for manual cleaning. A blank metal sheet replaces the screen during cleaning.

WRITE FOR NEW BULLETIN

INDUSTRIAL FILTRATION COMPANY
14 INDUSTRIAL AVE. LEBANON, INDIANA

▲ For more details circle NED-736 H4 on enclosed inquiry slip ▲

THE INSIDE STORY ON POWER



Bulletin No. DP-300 Gives You the FACTS on DUDCO DUAL-VANE HYDRAULIC PUMPS

DUDCO Vane Type PUMPS feature the exclusive Dual-Vane principle because it is the key to complete hydraulic balance and the elimination of excessive slippage and power loss. With single models of 3 to 60 gpm and double models with capacities from 24 to 120 gpm, DUDCO Pumps afford design engineers the advantages of equipment providing continuous pressures to 2000 psi.

WRITE for BULLETIN DP-300 . . . profusely illustrated . . . tells the entire story.

DUDCO DIVISION
THE NEW YORK AIR BRAKE COMPANY
1708 EAST NINE MILE ROAD • HAZEL PARK • MICH.

For more details circle NED-737 H4 on enclosed inquiry slip

What another user says about

WALES HOLE PUNCHING AND NOTCHING EQUIPMENT

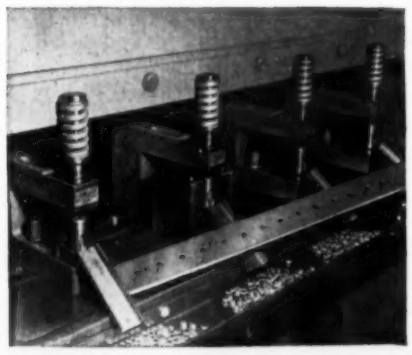
Mr. H. J. LOCKWOOD,
Plant Superintendent, BULLDOG ELECTRIC PRODUCTS OF LOS ANGELES, *writes:*

"Our products must maintain perfect uniformity from run to run, as one of the primary features of our switchboards is interchangeability of parts and the ability to add new units to an existing installation as our customers' manufacturing facilities expand. The use of Wales-Strippit equipment and templates assures this degree of perfection."

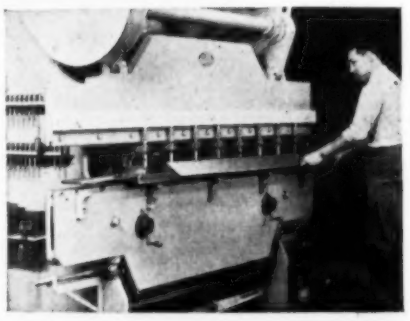
"When we recently embarked on a program of manufacturing power switchboards, my production methods were naturally centered around Wales equipment."

Mr. Lockwood's experience is typical of thousands of users of Wales patented, independent, self-contained Hole Punching and Notching Units that are used and re-used in unlimited setups in press brakes and stamping presses.

Wales time-saving, cost-saving methods make it a BIG story. Write for fully illustrated, functionally colored Catalog CJ *TODAY.*



◀ Close-up of Wales Type "CJ" Hole Punching Units with pin stop gaging for punching 56 holes (17/64" diameter in 5/16" thick copper) on 1¼" centers in bus risers and matching holes in steel mounting frames.



Wales Type ▶ "CJ" Hole Punching Units set up at BULLDOG Electric Products of Los Angeles. Note use of ram bar on front of ram to increase operating shut height of press brake.

WALES-STRIPPIT CORPORATION
George F. Wales, Chairman
363 Payne Avenue, North Tonawanda, N. Y.
(Between Buffalo and Niagara Falls)
Wales-Strippit of Canada Ltd., Hamilton, Ontario
Specialists in Punching and Notching Equipment

For more details circle NED-738 H4 on enclosed inquiry slip

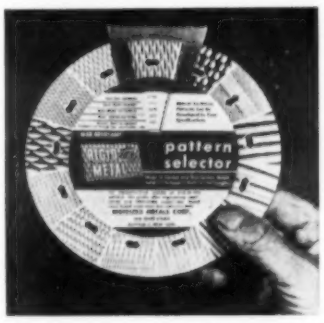
New Processes and Materials

SAFETY HAND CREAM protects against skin irritants

Protection against contact dermatitis caused by primary irritants as well as against sensitizing agents encountered on the job is offered by Kerodex skin safety cream. It presents a barrier to such irritants as acids, alkalis, solvents, oils, tar and pitch and to nickel, rubber, chromates, poison ivy and other sensitizing agents. Types for wet work and dry work protection are available. Other creams protect against irritating action of light rays, either natural or artificial, and photo-sensitizing action of tar, pitch and asphalt fumes. Made by **Ayerst Laboratories, Inc.,** Dept. NED, 22 E. 40th St., New York 16, N. Y.

For more details circle NED-739 H4 on enclosed inquiry slip

PATTERN SELECTOR dials data on rigidized metals



Pattern selector indicates complete specification data on 26 Rigid-Tex rigidized metal patterns at a turn of the wheel. Pattern number, width, thickness and depth are all shown. Reverse side covers applications for the material in various industries. Rigid - Tex metals are available in both coils and cut lengths with a variety of finishes. Properties include mar-resistance, flexural rigidity and a favorable strength/weight ratio. Selector is available from **Rigidized Metals Corp.,** 717 Ohio St., Buffalo 3, N. Y.

For more details circle NED-740 H4 on enclosed inquiry slip

MASKING TAPE is easily removed from work

Jobs that demand exceptionally easy removal of masking from work can make use of 721 low tack flatback masking tape. It was originally developed for masking over gold leaf where low adhesion is required to avoid removal of the gold leaf when the tape is peeled off. Other uses include stenciling, as a drafting tape and as a protective cover for polished metal. Made by **Permacel Tape Corp.,** Dept. R, New Brunswick, N. J.

For more details circle NED-741 H4 on enclosed inquiry slip

RELEASING AGENT prevents adhesives from sticking

Protection of adhesive applying and coating machines is afforded by M12 Release-Cote releasing agent. It prevents adhesives and coating from sticking and building up on parts of equipment. It can be applied to cleaned metal surfaces using either brush, rag, sponge or spray applicators. At clean-up time coated areas can be quickly cleaned with warm water or a simple water rinse. If rubbed on the hands it will also prevent adhesive from sticking to the skin. Compound is nonirritating and fume-free. It is available in quart, gallon and 5-gal containers. Made by **Potdevin Machine Co.,** 273 North St., Teterboro, N. J.

For more details circle NED-742 H4 on enclosed inquiry slip

Get this Bulletin

With infinite variable speeds, The U. S. Varidrive Motor will boost your production, increase operator's efficiency and produce better quality work. 2 to 10,000 r.p.m. ¼ to 50 hp. Request new Bulletin.

U. S. ELECTRICAL MOTORS Inc.
Box 2058, Los Angeles 54, Calif. Milford, Conn.

For more details circle NED-743 H4 on enclosed inquiry slip

New TOLEDO PIPE CUTTER for Cleaner Smoother Cut-offs!

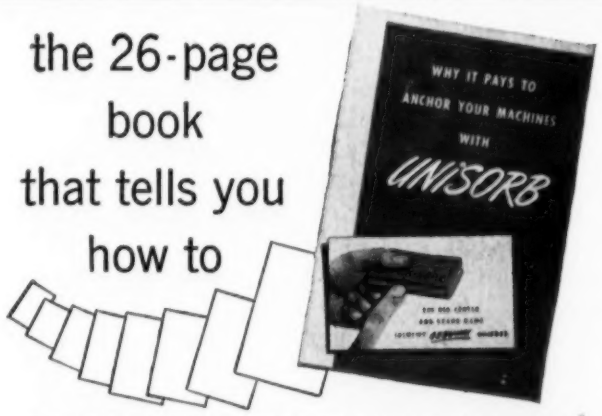
Heavy Duty Wheel and Roller

★ Positive clean-cutting action.
★ Hooks on pipe easily . . . tracks perfectly . . . sturdy malleable frame formed to fit the hand and guaranteed warp-proof.
★ High alloy steel cutter wheels leave practically no burr.
★ Rollers in hook provide a square base when starting tool on pipe. Cuts ⅛" to 2" pipe . . . with speed and ease! Order through your supply house. Write for new catalog. The Toledo Pipe Threading Machine Co., Toledo, Ohio. New York Office: 165 Broadway, Room 1310.

RELY ON THE LEADER! **TOLEDO**
PIPE TOOLS . . POWER PIPE MACHINES
POWER DRIVES

For more details circle NED-744 H4 on enclosed inquiry slip

the 26-page book that tells you how to



- ANCHOR MACHINES and eliminate 60-85% of transmitted vibration
- ELIMINATE DRILLING of wood or concrete floors when installing machines
- SAVE TIME and money (up to 30%) on installation costs

For your copy of this valuable book, showing actual plant installations of UNISORB®, return the coupon today.

the **FELTERS** company
224 South Street, Boston 11, Mass.

Please send me a copy of FACTS ABOUT ANCHORING YOUR MACHINES WITH UNISORB, at no obligation to me.

Name.....Title.....
(Please print)
Company.....
Address.....
City.....Zone.....State.....

Return to: The Felters Co., 224 South St., Boston 11, Mass.

For more details circle NED-745 H4 on enclosed inquiry slip

FLEX-A-FOAM FILTER MASKS

Dust protection your workers will welcome and wear *in even the HOTTEST weather*

★ **Ideal for Hot Weather** Filter's porous action absorbs and actually exhales body heat.

★ Flex-A-Foam's lightweight (only 1 ounce complete) makes it cool and comfortable to wear — not hot and cumbersome like old-fashioned respirators.

★ Flex-A-Foam is easier to breathe and talk through than an ordinary pocket handkerchief — does away with that stuffy, smothered feeling.

UNMATCHED ECONOMY

Flex-A-Foam is the lowest priced *quality* respirator on the market today.

Flex-A-Foam's washable filter outlasts throw-away type by more than 100 to 1.

Fewer filter replacements with Flex-A-Foam Filter Masks mean fewer lost production hours.

Your best *Ounce of Protection* against Irritating Dust

SAMPLE STILL ONLY $1.40 POSTPAID

FLEX-A-FOAM® FILTER MASK

THE GOGGLE PARTS COMPANY • CLEVELAND 13, OHIO

▲ For more details circle NED-747 H4 on enclosed inquiry slip ▲

9 times out of 10...

these handy STANDARD finishes will meet your SPECIAL finish needs!

"Special" finishing needs DON'T always require special finishes! This broad line of Sherwin-Williams STANDARD Industrial Finishes has been developed to meet the vast majority of industrial product finishing requirements—WITHOUT the delays and added cost involved in ordering special formulations.

Whether you finish wood or metal—whether your need is for unusual effects, or staple production items—you will find close-at-home convenience in these locally stocked materials. Consult your nearby Sherwin-Williams Branch, or write today for literature on the Sherwin-Williams Standard Industrial Finishes in which you are interested.

Another Product of SHERWIN-WILLIAMS INDUSTRIAL RESEARCH

SHERWIN-WILLIAMS
INDUSTRIAL FINISHES

The Sherwin-Williams Co.
General Industrial Division, Cleveland 1, Ohio

Please send literature on _____

NAME _____

COMPANY _____

ADDRESS _____

▲ For more details circle NED-748 H4 on enclosed inquiry slip ▲

New Literature & Catalogs

Hand-Detachable Counterbores

Ex-Cell-O Corp.—Standard, hand-detachable counterbores are subject of descriptive 8-page bulletin 60446. Piece shows sizes of holders, counterbores, countersinks and pilots, as well as complete counterbore sets. Counterbore cutters are engaged or released from holder with twist of the wrist. Double driving lugs on cutter shank engage double abutments in holder socket for balanced drive.

▲ For more details circle NED-749 H4 on enclosed inquiry slip ▲

Roller Chain Drive

Browning Mfg. Co.—52-page catalog CD-102-B on the Browning roller chain drive features roller chain sprockets with malleable split taper compression bushings. Specifications on stock chain and sprockets, engineering data and tables of hundreds of stock drive combinations already worked out are highlights.

▲ For more details circle NED-750 H4 on enclosed inquiry slip ▲

Torque Limiter

Morse Chain Co.—Torque limiters, compact, adjustable slip-clutch devices that provide automatic overload protection for machinery drives, are described in 8-page catalog C14-54. Design and operation information is given, as well as specifications for line of 11 standard models with torque capacities from 20 to 620 lb-ft. Specialized adaptations are described, as well.

▲ For more details circle NED-751 H4 on enclosed inquiry slip ▲

General Purpose Teflon Packings

United States Gasket Co.—Chemiseal general-purpose packings made of chemical-resistant Teflon are cataloged in bulletin TP-454. Products described are braided pure Teflon and braided Teflon-impregnated blue or white asbestos available in coils and cut rings; extruded Teflon packing; and Teflon bulk packing. How-to-order information is included.

▲ For more details circle NED-752 H4 on enclosed inquiry slip ▲

Welded Chain & Attachments

McKay Co.—All types of welded chains are cataloged as to working load limits, material diameter, link sizes, finishes, packaging and other specifying data in 16-page bulletin B. Illustrated piece covers both fire welded and electric welded chains made from low carbon, high carbon and alloy steel in standard types and sizes. Section is devoted to repairing links, grab hooks, slip hooks, cold shuts and connecting links used to construct special assemblies.

▲ For more details circle NED-753 H4 on enclosed inquiry slip ▲

Refrigeration & Air Conditioning

General Motors Corp., Frigidaire Div.—Division's role in conditioning air, water and food is outlined in 20-page brochure "Our Business Is Being Useful." Commercial refrigeration and air conditioning products and their various applications in business and industry are shown.

▲ For more details circle NED-754 H4 on enclosed inquiry slip ▲

Cutters, Broaches, Special Tools

Brad Foote Gear Works, Inc.—Over 2000 cutters, broaches and special tools available for making wide variety of gears, splines and racks are listed in recently published hob list. Tools are for special jobs and provide a stock which makes it possible to do most gear cutting without waiting for special tools to be made.

▲ For more details circle NED-755 H4 on enclosed inquiry slip ▲

Screw Machine Work

Avalon Machine Products, Inc.—12-page illustrated brochure covers contract screw machining service. Various typical parts that have been turned out and operation views are pictured. Company policy regarding quality control, hourly rates, purchase of new equipment and employee relations is also covered.

▲ For more details circle NED-756 H4 on enclosed inquiry slip ▲

Selecting A Motorpump

Ingersoll-Rand Co.—Actually a slidefilm in booklet form, "How to Select and Quote the Motorpump" is an informative and well illustrated booklet which gives a brief description of a centrifugal pump and how it works. It points out the various factors to be considered in selecting a pump for a specific installation. A typical problem is solved using the data, plus charts and curves.

▲ For more details circle NED-757 H4 on enclosed inquiry slip ▲

NOW! 5 important improvements in BUCKEYE Air Drills

✔ **PACKAGE VALVE**
Valve parts removed in one unit for inspection, cuts tool maintenance costs.

✔ **360° EXHAUST DEFLECTOR**
Satisfies every tool operator, can be positioned anywhere in full 360° circle.

✔ **QUIETER OPERATION**
New design developments have improved noise factor, make Buckeye air drills more quiet than ever.

✔ **PALM-FIT HANDLE**
Tool free from annoying projections and angles, fits hand in an easy, natural grip.

✔ **MORE INTERCHANGEABLE PARTS**
Identical cylinders in all "A" Series drills, all handle types, permits smaller parts inventory.

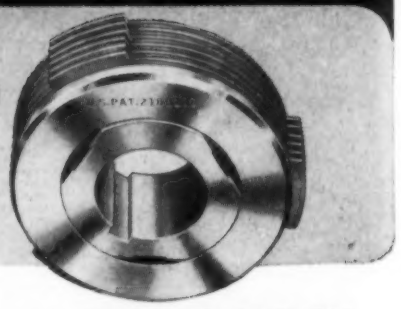
Complete details are available; write for your copy of our Air Tools Catalog.

Buckeye Tools CORPORATION
DIVISION 34 • DAYTON 1, OHIO

▲ For more details circle NED-758 H4 on enclosed inquiry slip ▲

New
FOR MACHINE...PRODUCT DESIGNERS

BUILD YOUR OWN CLUTCH WITH THE



MAXITORQ "DISC-PAC"

Due to a growing demand for Maxitorq Floating Discs, we now introduce the Maxitorq Disc-Pac . . . a self-contained unit independent of the actuator. Patented Maxitorq Separator Springs prevent heating in neutral . . . Locking Plate locks all discs onto body.

Thus you may build your own clutch (or brake) from our stock parts. Disc-Pac keys to shaft . . . easily replaced. Available in 8 diameters, 2" to 8", ¼ to 15 h.p. Disc-Pac fits Maxitorq Driving Rings, if you wish to use them. Write Dept. NE-8 for full specifications and prices.

THE CARLYLE JOHNSON MACHINE COMPANY
2CJ54 MANCHESTER, CONNECTICUT

▲ For more details circle NED-759 H4 on enclosed inquiry slip ▲

now 1 unit

Acme FLOW-TEMP® heat pump

. . . ideal comfort conditioner for small and medium size buildings*

industrial
commercial
institutional
residential

Today, heat pumps are proving their advantages in all climates for cooling and heating. An Acme Flow-Temp unit removes heat from water or ground sources and distributes it through Acme Remote Room Conditioners or a radiant floor, wall, or ceiling system. A simple flick of the wrist and the Flow-Temp Heat Pump changes from heating to cooling.

Before you install any conventional heating and air conditioning system, investigate the Acme Flow-Temp Heat Pump. Acme Heat Pumps are available in a wide range of capacities.

**Acme's Flow-Therm Heat Pumps for larger buildings.*

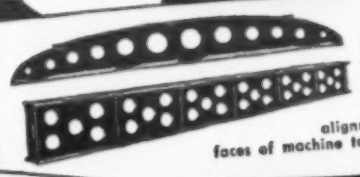
ACME INDUSTRIES, INC.
JACKSON, MICHIGAN

Continuously serving the Air Conditioning and Refrigeration Industry since 1919

▲ For more details circle NED-760 H4 on enclosed inquiry slip ▲

WORK MATES TO MORE EFFICIENT PRECISION CRAFTSMANSHIP

CHALLENGE
SURFACE PLATE EQUIPMENT
• HIGH GRADE SEMI-STEEL
• HEAT TREATED • PRECISION GROUND



STRAIGHT EDGES—For scraping planer and lathe bed ways . . . parallel straight edges for inspection of alignment and bearing surfaces of machine tools.

UNIVERSAL BOX ANGLES Combines the clamping facilities of an angle iron, the stable accuracy of a box parallel with the perpendicular flat surface of an angle plate.

ANGLE PLATES—Made in 22 sizes from 2¾ x 4¾ x 4¾ up to 24 x 24 x 24 for clamping and holding work.

V-BLOCKS—Feature ribbed sides, light weight and a V accuracy of .0005 inch . . . for supporting shafts for drilling, checking, etc.

BOX PARALLELS Complete range of sizes for every use . . . Accurate to .0005 inch.

THE CHALLENGE MACHINERY CO.
Office, Factories and Show Room: Grand Haven, Mich.
Challenge TRADE-MARK ®
Over 50 Years in Service of the Graphic Arts
DEALERS IN ALL PRINCIPAL CITIES
▲ For more details circle NED-761 H4 on enclosed inquiry slip ▲

POLYPENCO® NYLON SHAPES

MAKE LASTING REPAIRS with nylon parts machined in your shop

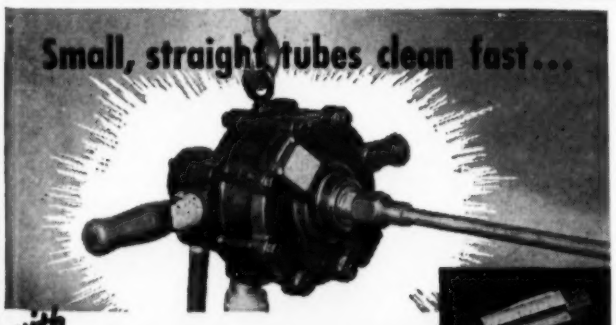
- Nylon gears, bearings, rollers and other wear parts often last longer than metal parts . . . require little or no lubrication . . . run quietly.
- Make one part or hundreds economically on standard metalworking tools.
- Easy machining . . . no special operator skills.
- Immediate warehouse delivery of most type sizes.
- Uniform high quality . . . technical help.

WRITE FOR INFORMATION ON NYLON SHAPES

The POLYMER CORPORATION of Penna. • Reading, Penna.
In Canada: Polypenco, Inc., 2052 St. Catherine W., Montreal, P.Q.

POLYPENCO® NYLON
... teflon* and other non-metallics

Stocks: Reading • Chicago • Los Angeles • Newton (Mass.) • Branford (Conn.)
*trademark for DuPont tetrafluoroethylene resin
▲ For more details circle NED-762 H4 on enclosed inquiry slip ▲



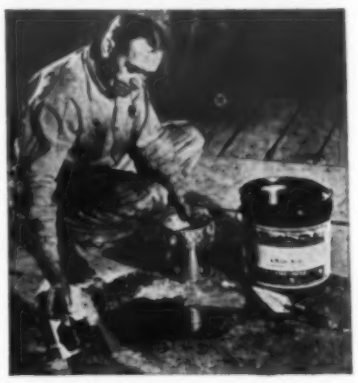
with LAGONDA SUSPENSION TYPE CLEANERS

Teamed with the right drill or brush, this suspension type cleaner makes short work of soft or hard deposits in small straight tubes. It can be air or electric driven. The improved motor has two ball-type thrust bearings for absorbing push and pull forces imposed on the cleaner during operation. The "squeeze" trigger control assures instant regulation from wide open to shut off. Brushes are available for light deposits in soft copper or brass tubes. Drills available are illustrated at right. For additional information, call your local Elliott Field Engineer, or write for bulletin to Elliott Company, Springfield, Ohio.

ELLIOTT Company
Y4-10
STEAM TURBINES • MOTORS • GENERATORS • DEAERATING HEATERS • EJECTORS • CONDENSERS
CENTRIFUGAL COMPRESSORS • TURBOCHARGERS • TUBE CLEANERS • STRAINERS
▲ For more details circle NED-763 H4 on enclosed inquiry slip ▲

New Processes & Materials

CONCRETE REPAIR COMPOUND takes traffic 45 minutes after use



Repair and patching compound makes quick, permanent repairs of interior concrete floors with little interruption in traffic flow. Called Kwic-Roc and supplied in powder form, material is mixed with water, poured into cleaned hole or crack and leveled. It will take traffic within 45 minutes after pouring. It has more than twice the compressive strength of average floor concretes, but is not recommended for exterior use or for floors constantly wet or subject to spillage of water or acids. Standard container weighs 100 lb. Made by **Sun Chemical Corp.**, A. C. Horn Div., Dept. P, Tenth St. & 44th Ave., Long Island City 1, N. Y.

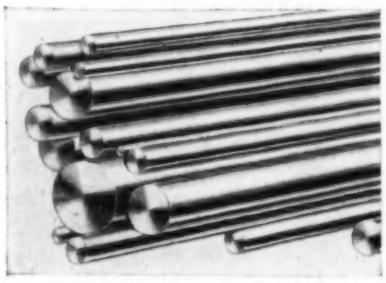
▲ For more details circle NED-764 H4 on enclosed inquiry slip ▲

ALUMINUM SOLDER for use on wrought and cast alloys

Core of AluTin 51 solder for production, filling, sealing and repair operations upon wrought and cast aluminum alloys is a liquid flux with good wetting properties. It reduces surface tension and permits the alloy to spread and flow out wherever the flux has wet the surface. Accelerated tinning action facilitates bonding and permits high strength porosity-free deposits. Melting range is between 400 and 500° F and tensile strength is up to 7000 psi. Any type of heat source may be used. Alloy can also be used on steel and other metals. Made by **Eutectic Welding Alloys Corp.**, Dept. P, 172nd St. & Northern Blvd., Flushing 58, N. Y.

▲ For more details circle NED-765 H4 on enclosed inquiry slip ▲

ALL-PURPOSE STEEL BARS for maintenance, shaft replacement



Ample strength and wearability to replace most any alloy or heat treated carbon steel bar are built into Stressproof all-purpose maintenance steel bars. Steel bars are offered for plant maintenance departments which are not equipped to replace all types of steel shafting and machine parts, or which do not have the facilities for easy machining of tough alloy steels or heat treated steel bars. Stressproof is easily machined, and warpage is negligible. It is offered in rounds from ⅜ through 3¼-in. and in hexagons from ⅜ through 2 in. Made by **La Salle Steel Co.**, 1424 150th St., Hammond, Ind.

▲ For more details circle NED-766 H4 on enclosed inquiry slip ▲

ALUMINUM FOIL TAPE with pressure-sensitive adhesive

Tensile strength of 32 lb per inch of tape width is claimed for Scotch aluminum foil tape No. 425. Of pressure-sensitive type, it is made with a dead-soft aluminum foil backing coated with a high-tack thermosetting type adhesive. Total thickness is 5.25 mils. Applications include industrial sealing, splicing, electroplating, conduction and heat reflection jobs. Its elongation is 15 per cent at breaking point, adhesion is 60 oz per inch of tape width. Tape is unaffected by extreme humidity conditions and possesses good heat reflection, weathering, moisture resistance and conductivity characteristics. It is available in ¼ to 24-in. widths on 60-yd rolls. Made by **Minnesota Mining & Mfg. Co.**, Dept. NED, 900 Fauquier St., St. Paul 6, Minn.

▲ For more details circle NED-767 H4 on enclosed inquiry slip ▲

BEWARE THE LAMPANTHER

The *Lampanther* lurks in every poorly lighted plant, always prepared to pounce on profits and rip maintenance economy to shreds. Send him scurrying with his tail between his legs. Keep on hand an ample supply of CHAMPION Lamps and follow the simple, sensible suggestions in the *Champion Maintenance Manual.**

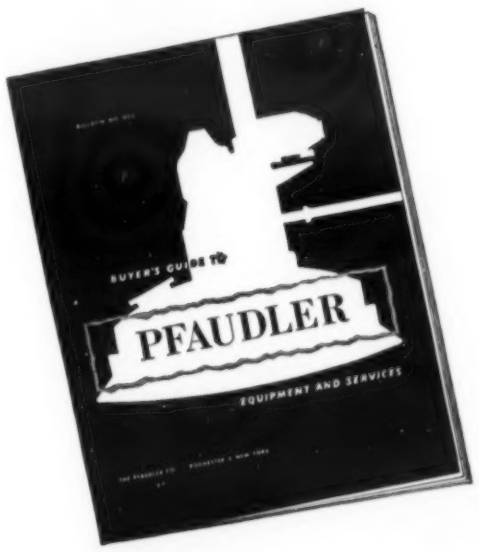
**May we mail you a complimentary copy of the Manual?*

CHAMPION LAMP WORKS
586 Broad Street • Lynn, Massachusetts

CHAMPION Lamps

▲ For more details circle NED-768 H4 on enclosed inquiry slip ▲

12-PAGE
BUYER'S GUIDE



shows complete line of processing equipment and services

Contains pictures and data, valuable information on how you can get special help in selecting materials and designs for processing equipment.

Saves you time, when new equipment is needed quickly for a new or revised process.

PARTIAL LIST OF CONTENTS

How to get process engineering help
Reactors—glassed steel and stainless steel
Custom-built alloy equipment
Characteristics of glassed steel
Heat exchangers and columns
Glassed steel pipe, fittings, valves, etc.
Evaporation equipment
Facilities available at Pfaudler factories

If you don't already have a copy of the "Buyer's Guide to Pfaudler Equipment and Services," mail the coupon and we'll send you one immediately.

Pfaudler

THE PFAUDLER CO., Dept. NED-8, Rochester 3, N. Y.
Please rush me a copy of the Buyer's Guide to Pfaudler Equipment and Services.
Name_____
Title_____
Company_____
Address_____
City_____ Zone____ State____

▲ For more details circle NED-769 H4 on enclosed inquiry slip ▲

CHICAGO TRAMRAIL

JIB CRANES

FASTER HANDLING *at less cost*

- 360° Swing • Self-Supporting
- Capacities from ½ ton to 5 tons
- Complete Line of Pillar, Mast and Wall Type Jib Cranes

Write for Catalog

CHICAGO TRAMRAIL CORPORATION
4000 West Washington Boulevard • Chicago 24, Illinois
OVER HEAD CRANES • STAK-RAK CRANES
MONORAIL SYSTEMS AND RACKS

▲ For more details circle NED-770 H4 on enclosed inquiry slip ▲

are Sweeping the Electrical Industry!

More and more manufacturers are getting into the swing to AMP FASTON connectors! Timers, clocks, switches, outlets, controls—all types of electrical components when equipped with AMP FASTON tabs not only *cost less* to produce, but offer all the advantages of easier, faster wiring on the line. To install, simply push FASTON on its mating tab. Wiring is accomplished in a fraction of the time required for screw-type terminal posts!

Triple spring action and wide wiping contact of AMP FASTON provides excellent electrical connection. U.L. approved, patented, AMP F CRIMP is voidless—gives high tensile strength and resists corrosion even under most humid conditions. Write today for information and samples!

Aircraft-Marine Products, Inc.
2100 Paxton Street, Harrisburg, Pennsylvania

▲ For more details circle NED-771 H4 on enclosed inquiry slip ▲

HERE'S IMPORTANT GEAR NEWS!

See how you can get increased gear life and greater capacity in less space . . . with the hardest, toughest, most accurate industrial gears made . . . and reduce costs at the same time!

Send for this free folder now!
FOOTE BROS. GEAR AND MACHINE CORPORATION
4545 S. Western Blvd., Chicago 9, Ill.
Dept. NE
FOOTE BROS.

▲ For more details circle NED-772 H4 on enclosed inquiry slip ▲

New Literature & Catalogs

Control Instruments

Minneapolis-Honeywell Regulator Co., Industrial Div.—28-page illustrated catalog 5001 covers complete range of control instruments and accessories, including pyrometers, potentiometers, temperature detectors and thermometers, pressure gages, flow and liquid level meters, servo systems and components, valves, motors, panelboard instruments and dampers.

▲ For more details circle NED-773 H4 on enclosed inquiry slip ▲

Engineered Production Service

Sundstrand Machine Tool Co.—Numerous examples of "Sundstrand Engineered Production Service" for small lot, long run and special high production work are shown in 32-page brochure of this title. Special tooling and attachments used on automatic lathes are shown for machining cylinder liners, tractor shafts, bearings, impellers, worm gears and hubs, bearing races, clutch parts, pump rotors, hub plates, gear blanks, fin rings, tractor rear axles, spherical surfaces, tubs and track roller hubs.

▲ For more details circle NED-774 H4 on enclosed inquiry slip ▲

Antifriction Bearings

"Antifriction Bearings" is a complete textbook and reference guide for engineers, designers and bearing users. Subject matter includes bearing types, design, capacity, load computation, type and size selection, lubrication, mounting and installation procedures and illustrated applications. Data are also given on identification code and industry standard numbers, history of bearing design and manufacturers and on highlights of important industry personalities. Book is priced at $7.75 from Morton Bearing Co., 815 Wildt St., Ann Arbor, Mich.

▲ For more details circle NED-775 H4 on enclosed inquiry slip ▲

Sump Pumps

Byron Jackson Co., Pump Div.—20-page illustrated BJ Sumpmaster bulletin 54-3-1420 contains information and technical data for making correct selection for your needs from line of more than 4000 sump pumps. Capacities range from 10 to 2600 gpm with heads from 20 to 300 ft. Selection charts are provided which show correct model number if given desired flow and total head. Construction features are also shown.

▲ For more details circle NED-776 H4 on enclosed inquiry slip ▲

Teflon Packings

Durametallic Corp.—Especially suitable for difficult sealing jobs in chemical and petro-chemical fields is line of Teflon packings described in illustrated data sheet 461. Inert to most chemicals, packings operate satisfactorily over −90 to 450° F temperature range. They are available in all standard sizes from ¼-in. up. Data sheet also briefly lists other specialized packings.

▲ For more details circle NED-777 H4 on enclosed inquiry slip ▲

Platers' Equipment

Udylite Corp.—Return, straight line, rotary and junior types of full automatic plating machines are described and illustrated in 24-page general catalog. Also detailed are barrel plating equipment and accessories, electrical equipment, filters, dryers and a listing of processes and supplies.

▲ For more details circle NED-778 H4 on enclosed inquiry slip ▲

High Vacuum Steam Heat System

Illinois Engineering Co.—Selectotherm high vacuum steam heating system that adjusts fuel consumption to actual heating requirements is described in 16-page illustrated bulletin 540. Savings up to 20 per cent in installations converted to Selectotherm are possible because space temperatures are regulated by control of the firing device at the boiler.

▲ For more details circle NED-779 H4 on enclosed inquiry slip ▲

Measuring & Recording Instrument

Warner & Swasey Research Corp.—12-page illustrated bulletin "Probograph" describes an automatic recording precision measuring instrument available for either toolroom or production work which is electrically operated and records dimensional findings in graph form. Work which it will check includes gears, cams, turbine blades, hole distances, surface roughness, inspection, quality control, sorting and research. Operating principle is shown and various models are covered in detail. Magnification ratios range from 10 to 800:1.

▲ For more details circle NED-780 H4 on enclosed inquiry slip ▲

PLATECOIL
(REPLACE PIPE COILS)
cost less than fabricating pipe coils in your own plant

You can buy Platecoils for less money than it costs to fabricate pipe coils in your own plant. You also save critical steel because Platecoils require less than ½ the steel used in pipe coils of the same surface area. Installation takes far less time as Platecoils are mounted on simple hangers instead of the complicated racks needed for pipe coils. They take 50% less space.

Send for complete technical manual and descriptive Bulletin No. P57.

PLATECOIL Division
Tranter Mfg. inc.
LANSING 4, MICHIGAN

▲ For more details circle NED-781 H4 on enclosed inquiry slip ▲

A "PEN" MICROSCOPE at work in quality control at Bridgeport-Lycoming

Quality control work at the Bridgeport-Lycoming Division of Avco, manufacturers of aircraft engines and jet engine components, is one of the many applications which leading industrial companies have found for the Pike Model V "Pen" Microscope — the instrument that's no larger than a fountain pen — yet gives magnifications of 40x, 50x or 60x. Ruggedly made and easy to use — yet built with the optical precision of a laboratory microscope.

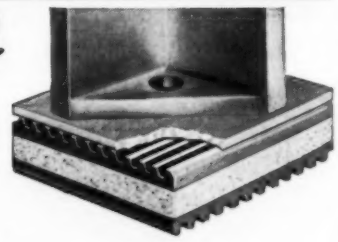
Ideal for on-the-spot examination of specimens — eliminates time-consuming techniques. Self-illuminating by means of mirror that reflects external light source. Price $15.75.

Write for literature on Pike "Pen" Microscopes and FLASH-O-LENS models combining magnifiers and self-contained light sources

E. W. PIKE & COMPANY
492 NORTH AVENUE ELIZABETH 3, NEW JERSEY

▲ For more details circle NED-782 H4 on enclosed inquiry slip ▲

Eliminate Bolting Costs!



with

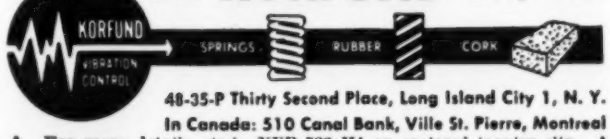
KORFUND VPS Elasto-Rib Damper

Since the cost of Korfund VPS is less than the cost of bolting down equipment such as machine tools, punch presses, air conditioning equipment, engines and printing presses, the excellent vibration and noise control provided is really given as a bonus. The VPS Damper pays for itself immediately.

New Korfund VPS Elasto-Rib Damper is furnished with a non-skid load distributing top plate permanently fastened to time-proven Elasto-Rib. Since it is installed in most cases by merely placing it under the machine legs, quick rearrangements of production lines are possible without expensive "downtime" delays. The VPS Damper prevents machine "walking" or "creeping", and provides excellent vibration and noise control.

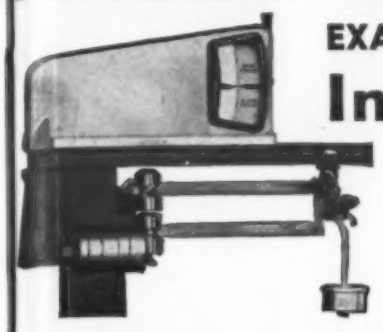
Write for Bulletin 19 which gives full details.

THE KORFUND CO., INC.



48-35-P Thirty Second Place, Long Island City 1, N. Y.
In Canada: 510 Canal Bank, Ville St. Pierre, Montreal

▲ For more details circle NED-783 H4 on enclosed inquiry slip ▲



EXACT WEIGHT
Indicator

. . . Gives You Faster, More-accurate Weighing On Your Present Scale!

Quickly and easily attached to your platform scale, the EXACT WEIGHT Indicator will repay its small cost many times over. It provides visible magnified indication that can be read at a glance—and weighing is further speeded by the snubbing action of a simple dashpot. Cuts seconds off each weighing operation—reduces labor costs—eliminates overweights! Write for details.

Exact Weight Scales
Better quality control
Better cost control

THE EXACT WEIGHT SCALE COMPANY
930 W. Fifth Ave., Columbus 8, Ohio
2920 Bloor St. W., Toronto 18, Canada

For more details circle NED-784 H4 on enclosed inquiry slip

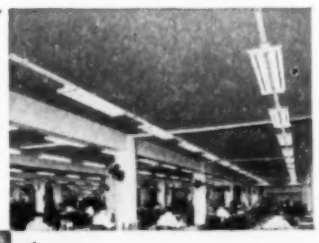
UNISTRUT® CHANNEL AND FITTINGS approved by UNDERWRITERS' LABORATORIES as a Surface Metal Raceway!

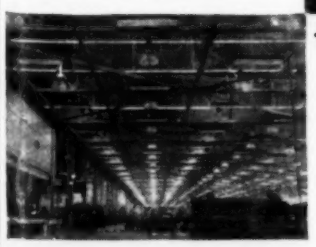
Long popular as a quick-erected, low-cost method of lighting support, UNISTRUT channel and fittings have now been approved for use as a surface metal raceway ...for wiring lighting installations and for supplementary power wiring (up to 600 v.) of machines, motors, other lighting rows, etc.

The approved UNISTRUT system gives you:

- Fast, low-cost installation from stock parts.
- Simple wiring, wires are *laid in* channel and closer strip snapped in place.
- True alignment, continuous channel support is undisturbed by servicing or re-lamping.
- Added convenience, supplementary power lines tapped anywhere along channel.
- Neat appearance, concealed wiring eliminates unsightly external lines.
- Continuous run or spaced lamps, fixtures easily attached at any point on channel.

In this building, UNISTRUT channel was used to support and wire a lighting installation on a concrete ceiling. Savings over conventional methods of installation were estimated at 50%! Note the neat appearance and perfect rows of fixtures.





Lighting for a large manufacturing plant was solved fast at low cost by using UNISTRUT channel for support and wiring. Even on ceiling arrangements as this, using two types of fixtures, the UNISTRUT system installs easily.

Write today for free copy of bulletin FF-3 and Underwriters' Laboratories specifications. Warehouse stocks in all principal cities. In Canada, Northern Electric Company. For export, Pressed Steel Car Co., New York, N. Y. Consult your telephone directories.

UNISTRUT PRODUCTS COMPANY
1013 W. Washington Blvd.
Chicago 7, Illinois
Dept. N-8

U.S. Patent Numbers 2327587 2380379 2329815 2405631 2345650 2541908 2363382
Other Patents Pending

UNISTRUT

The World's Most Flexible All-Purpose Metal Framing

For more details circle NED-785 H4 on enclosed inquiry slip

New Processes & Materials

STEEL SUPPLY for maintenance, offered in rack

Complete steel supply for repair, maintenance and construction use is provided by this Handi-Steel Mill. Heavy gage metal rack for storage has handy decimal equivalents chart and other information on front for ready reference. Steel assortment includes 31 rounds of seven sizes, 12 Thredrods in four sizes, 15 flats of three sizes, 12 squares in four sizes, 12 angles of four lengths and 12 galvanized sheets. All items are protected with rust-resistant finish. Offered by **Electro-Hercules Steel Co.,** Dept. NED, 1448 E. 49th St., Cleveland 3, O.

For more details circle NED-786 H4 on enclosed inquiry slip

DRY TUMBLING COMPOUNDS for producing high luster finishes

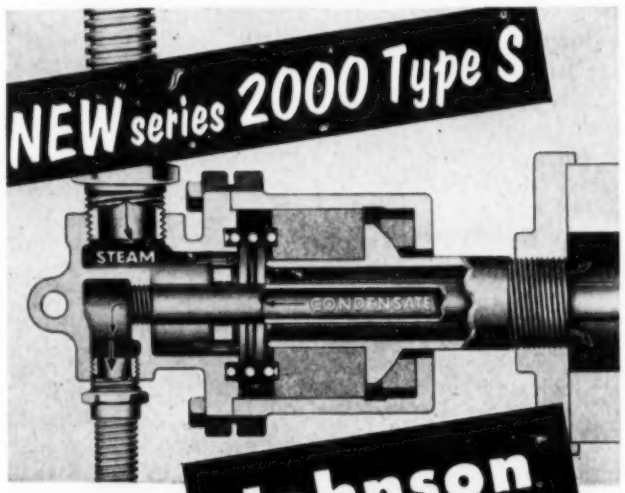
Designed for dry tumble finishing, Tumb-L-Grayn compounds are used for imparting high luster to such parts as jewelry findings, screw machine products and wire. Compounds consist of treated granules, obtainable in various sizes. They are equally suitable for use on ferrous, nonferrous or precious metals. Separation of compound and parts after tumbling is easily accomplished, and it can be restored to its original condition after use by addition of a special cream. Parts are readily wiped or washed off. Made by **Tumb-L-Matic, Inc.,** 4511 Bullard Ave., New York 70, N. Y.

For more details circle NED-787 H4 on enclosed inquiry slip

NYLON BRAIDED CORD resists acids, alkalis, mildew

Resistance to acids, alkalis, mold or mildew is feature of King Cotton 100 per cent nylon braided cord. It has four times the strength of Cotton Chalk or Mason's line. Cord does not absorb moisture, dirt, dust or mortar. Sizes 18 and 21 are offered on 100, 250, 500 and 1000-ft spools. Made by **John H. Graham & Co.,** Dept. NED, 105 Duane St., New York 8, N. Y.

For more details circle NED-788 H4 on enclosed inquiry slip



Johnson Self Supporting Joints
Now Smaller Size
- Lighter Weight
- Lower Cost
- Longer Life

WRITE FOR NEW CATALOG

THE JOHNSON CORP., 812 WOOD ST., THREE RIVERS, MICH.

For more details circle NED-789 H4 on enclosed inquiry slip

MONARCH Mono-Cushions®

- MORE TON-MILES PER DOLLAR Performance-proven special rubber stocks wear evenly . . . last longer.
- GREATER CUSHIONING ACTION . . . for vehicles, loads, floors and drivers.
- KING OF THE SOLIDS . . . through continuous research, proven design, special production techniques.

MONARCH has developed industrial tire stocks with outstanding wear resistance and service life . . . has created tire and tread designs that cushion shocks and shock loads, assure maximum stability on short turns and high lifts, have superior non-skid qualities, steer easily. Specify MONARCH . . . *for every lift truck application.*

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260 LINCOLN PARK
HARTVILLE, OHIO

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SPECIALISTS IN INDUSTRIAL SOLID TIRES

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New COMPACT DESIGN SAVES UP TO 40% SPACE!

Proven PERFORMANCE WITH EXTRA HIGH SAFETY FACTOR!

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OIL pressure to 750 — AIR to 200 P. S. I.

Now the sensational new T-J Spacemaker sets the pace in compact cylinder design and efficient performance!

New "Self-Aligning" adjustable oil cushion means faster acceleration and better cushion than ever before . . . New T-J Super Cushion Flexible Seals for air insure positive cushion with automatic valve action for fast return stroke.

More plus features include—heavy wall, precision honed, hard chrome plated, seamless steel body . . . leakproof cylinder head to body construction . . . heavy duty, high-tensile, *hard chrome plated piston rod.* Write for bulletin SM-454-2. The Tomkins-Johnson Co., Jackson, Mich.

T-J TOMKINS-JOHNSON
RIVITORS . AIR AND HYDRAULIC CYLINDERS . CUTTERS . CLINCHORS

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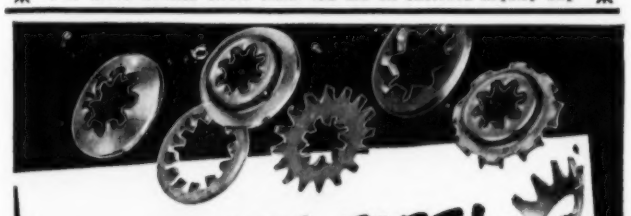

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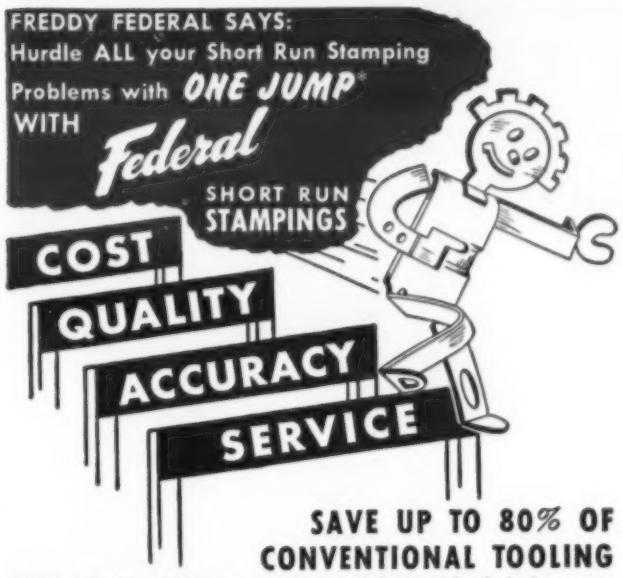

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Willing to invest 3¢ on a sure winner? Federal leads in low cost, high quality "Controlled Tolerance" stampings, because they have complete die-making facilities and properly trained personnel to handle any job, large or small. Federal is equipped to stamp sizes and shapes up to 9"x12", and up to 1/4" thick, in any quantity from 2 pieces to 10,000 from any stampable material (metal, fibre, phenolic, plastic, etc.) Be the winner by sending us your drawing today for quotation and prompt delivery schedule.

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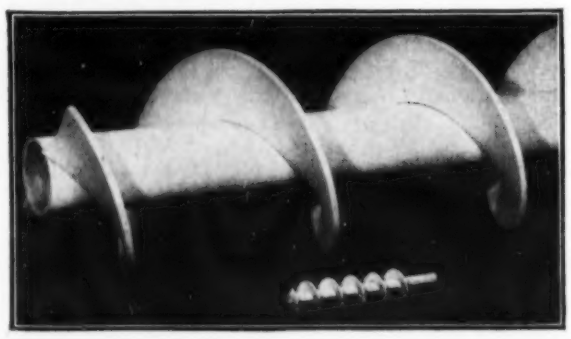
BOTTLES TO BOXCARS

The large worm shown below is used for unloading boxcars while the small worm is used for filling bottles. An illustration of the sizes and designs available.



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WORMS AND SPIRALS

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T-BOLTS
BOLSTER & T-SLOT TYPES TO J.I.C. PRESS ROOM STANDARDS

Forged precision machined heat treated. Tensile strength 150,000 lbs.

SIZES
BOLSTER BOLTS
—dia. to 1½" Heads sq. to 3" hex. to 2⅝" T-Slot bolts, ½", ⅝", ¾" dia. lengths to 12". 1" dia. 4" to 22" long.

NUTS—
hardened—threaded to close fit.
WASHERS—hardened — ground both sides.

Write for bulletin-prices

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For your convenience TWX-DE894

For more details circle NED-795 H4 on enclosed inquiry slip

New Literature & Catalogs

Infrared Heaters

N. J. Thermex Co.—Infralite radiant heater of the infrared type which provides over 100 w per square inch of lamp surface is subject of 4-page illustrated bulletin. Used for drying, baking and heating, heater is offered in sizes from 6 to 72 in. long, 100 to 10,000 w, 115 to 230 v.

For more details circle NED-796 H4 on enclosed inquiry slip

Testing Sieves

Newark Wire Cloth Co.—Line of standard testing sieves, market grade testing sieves and testing sieve shaker is detailed in 6 pages of illustrated bulletin. They conform to NBS, ASTM and ASA standards. Specifications are given.

For more details circle NED-797 H4 on enclosed inquiry slip

Finishing Forging Dies

American Wheelabrator & Equipment Corp. — "Finish Forging Dies in Minutes" is title of 4-page illustrated bulletin which covers the finishing of forging dies by the wet blasting process. It removes burrs and blends grinding lines and tool marks to reduce "break-in" time of the die. Tolerances of 0.0001-in. are maintained and parting line edges are not destroyed or altered.

For more details circle NED-798 H4 on enclosed inquiry slip

Electric Heating Units

Westinghouse Electric Corp.—23 pages of illustrated booklet B-6161 present data on electric heating units, thermostats and snap switches. Tables list wattage required, supply voltage and dimensions. Covered are immersion, bolt, finned and special shaped units, cartridge heaters, glue and melting pots. Section is devoted to selection of the right heater for a specific job.

For more details circle NED-799 H4 on enclosed inquiry slip

Resistors & Power Rheostats

Model Engineering & Mfg., Inc., Tru-Ohm Products Div.—Over 20 pages of technical data, photographs and charts are found in the 1954 catalog on line of resistors and power rheostats. Fixed, adjustable, Standohm, Econohm, axial lead, midget oval, and Tru-Rib resistors are covered, along with 25, 50, 75, 100 and 150-w power rheostats.

For more details circle NED-800 H4 on enclosed inquiry slip

Safe Welding & Cutting Practices

Air Reduction Sales Co.—"Safety" is title of 32-page illustrated pocket guide book for welding and cutting operators handling oxyacetylene and arc welding equipment. It details safety precautions and rules for personal safety, handling and maintenance of cylinders, torches, regulators and hoses. Setting up, adjusting, using and shutting down are discussed.

For more details circle NED-801 H4 on enclosed inquiry slip

Photorecording Papers & Films

Eastman Kodak Co., Industrial Photographic Div. —Assistance in selecting the correct photorecording paper or film for a specific industrial use is provided by 4-page bulletin F3-11. Photographic characteristics and variety of winding specifications for papers and films for use in oscillographs and other recording instruments are given. Data on light sensitivity and thickness are provided.

For more details circle NED-802 H4 on enclosed inquiry slip

Investment Casting

Hitchiner Mfg. Co.—"Investment . . . For Economy . . . For Performance" is 12-page illustrated booklet which tells the story of precision investment casting and its advantages and limitations. The many steps involved are described clearly. Comparison is made with number of operations involved in machining a similar part from bar stock. Production facilities and typical parts are shown.

For more details circle NED-803 H4 on enclosed inquiry slip

Adjustable Speed Drives

General Electric Co.—Complete line of packaged variable speed drives from 1 to 200 hp is described in 20-page illustrated bulletin GEA-6127. Operation and design features of the basic direct current motor drive unit are described, together with the many additional available features. Applications are shown in materials handling, lumber, machine tool, textile and steel industries.

For more details circle NED-804 H4 on enclosed inquiry slip

Now—Lock Your Feed Rates to Protect Machines . . . Reduce Costs with the CROSS Flow Control Lock!

Only authorized personnel carry a key for the Cross Flow Control Lock! They set machine feed rate, then lock it.

Easy to install. Just remove valve nameplate and adjusting lever, reinstall over lock mounting plate.

Available for Vickers 1/4" flow control valves and remote control panels.

For full details, write Dept. A36.

- Eliminates Tampering
- Stops Costly Shutdowns
- Prevents Tool Abuse and Breakage
- Protects Machines Against Overloads
- Reduces Maintenance Costs

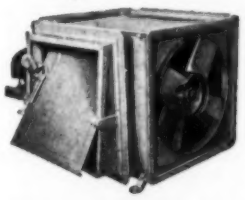
Established 1898
THE CROSS CO.
DETROIT 7, MICHIGAN

For more details circle NED-805 H4 on enclosed inquiry slip

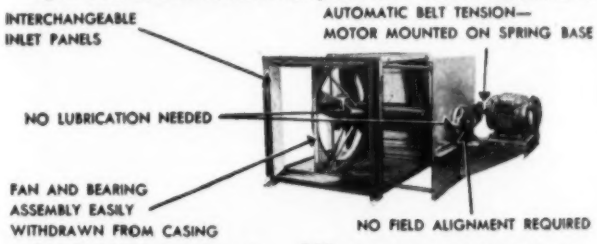
NEW WING DRAFT INDUCER

ADVANCED DESIGN SETS NEW HIGH STANDARD

EASIER INSTALLATION • MORE ADAPTABLE • INSURES LONG, CAREFREE OPERATION

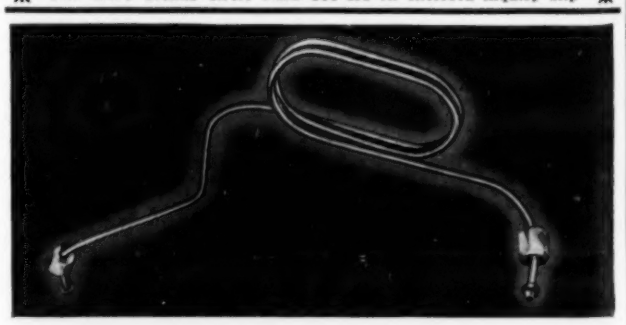


Wing Draft Inducers furnish positive uniform draft regardless of wind or weather conditions. They eliminate the need for tall, costly chimneys. Smoke and soot are reduced and boiler efficiency is improved. Higher CO_2's and better fuel consumption result. Write for Bulletin 1-52.



L. J. Wing Mfg. Co. 165 Vreeland Mills Road Linden, New Jersey

For more details circle NED-806 H4 on enclosed inquiry slip



THIS 1/4" TUBING FUELS CATERPILLAR DIESEL ENGINES AT PRESSURES UP TO 1,700 PSI

On Caterpillar Tractor Co.'s new 150 D.B. hp "Boss of the Crawlers," diesel fuel is injected to cylinders at pressures up to 1,700 psi. So fuel injection tubing must be clean, have tremendous burst strength and resistance to fatigue. C-1008 Low Carbon Steel Tubing, made by Superior, easily meets Caterpillar's stringent specifications. Specially conditioned, drawn to order and tested to the utmost, it has a Rockwell hardness of B-65 maximum—can be upset and formed into loops and bends without excessive springback. Bore is uniform, clean and free of cracks or seams that might cause failure. This tubing—or one of our 55 other analyses—may solve *your* problem. Send for free Carbon Steel Catalog Section 30, and tell us about your tubing troubles.

All analyses .010" to ⅝" O.D.
Certain analyses in light walls up to 2½" O.D.

SUPERIOR TUBE COMPANY
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Superior Tube
THE BIG NAME IN SMALL TUBING

For more details circle NED-807 H4 on enclosed inquiry slip

FLOOR TRUCKS

"KEEP LOADS ALIVE"

STANDARD SIZES & TYPES
SPECIAL DESIGNS
VARIOUS TYPE WHEELS:
IRON - RUBBER - PNEUMATIC

Write for catalog

ORANGEVILLE MFG. CO.
Orangeville 12, Pa.
"Since 1879"

FLOOR TRUCKS ORANGEVILLE

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Replaceable
BALL BEARING
CONNECTING ROD ENDS

Hole sizes: 3/16", 1/4" and 3/8". Also furnished in complete sets with lock springs and rods of any desired length.

YOU GET POSITIVE, friction-free control with the new Avalon Ball Bearing Connecting Rod Ends. Bearings rotate in Super Leadloy steel housings to compensate for misalignment up to 20°. Friction is reduced up to 90% by the ball bearing action.

Bearings are easily removed and replaced if necessary, saving the cost of housings.

Precision made to meet aircraft standards and to assure extra long wear, especially where continual rotation is involved.

Write Today for Literature

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2535 E. IMPERIAL HIGHWAY
LOS ANGELES 59, CALIF.

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New Processes & Materials

BLASTING MEDIUM
for general purpose operations

Cyclone Blast abrasive grain is suitable for a wide range of finishing operations including roughing, surfacing, tumbling, wet or dry blasting, cleaning and polishing on stone, metals, glass and plastics. Careful heat annealing and milling used in manufacture of this aluminum oxide results in sturdy chisel-sharp cutting edges and toughness. Standard grit sizes available range from 10 through 240. Made by **Abrasive Products Co.**, Box 107, Lansdowne, Pa.

▲ For more details circle NED-810 H4 on enclosed inquiry slip ▲

LIGHTWEIGHT AIR HOSE
is made from plastic compound

Lightweight Bostrene plastic air hose is available in ¼ and ⅜-in. ID sizes. Former weighs 8.8 lb per 100 ft, latter is for working pressures up to 120 psi at room temperature. Line oilers for pneumatic tools can be used with the hose, which is abrasion and flame resistant. Flexibility is another feature. Hose is bright red in color for easy identification. Made by **Boston Woven Hose & Rubber Co.**, Extrusion Dept. Dept. NE, P. O. Box 1071, Boston 3, Mass.

▲ For more details circle NED-811 H4 on enclosed inquiry slip ▲

STAINLESS STEEL WIRE
for use with various welding methods

Chrome - nickel, straight chrome or chrome - molybdenum steel can be welded with line of Chromar stainless steel wire. Sound welds can be obtained with submerged arc, inert gas, oxyacetylene or atomic hydrogen methods. Wire is available in 17 different compositions in level-layer wound spools, coils, and straightened and cut bundles. Standard coils are 12 in. ID and about 2½ in. wide. Wire is used with Arcosite flux in submerged arc welding. Made by **Arcos Corp.**, Technical Literature Div., 1502 S. 50th St., Philadelphia 43, Pa.

▲ For more details circle NED-812 H4 on enclosed inquiry slip ▲

WHEN DRILLING CONCRETE

USE THE DRILL THAT GIVES YOU 50% MORE HOLES!

● Users tell us they get 50% more holes in concrete with TERMITE Rotary Masonry Drills. This superior performance is due to TERMITE's exclusive worm construction and the "WICTU" inserts which last longer and penetrate faster. TERMITE Drills give you cleaner, more accurate holes and their pulverizing action eliminates objectionable noise. Insist on the leader in the field... Remember the more holes you get per drill—the lower your drilling costs. Write for FREE literature and the name of your nearest TERMITE Drill distributor.

Lengths up to 36". Standard diameters from 3/16" to 5". Other diameters up to 8" on special order. Use with standard electric drills or air motors. FREE FACTORY SERVICING.

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Manufacturers of
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ROTARY MASONRY DRILLS
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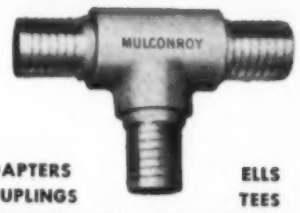
For Flexible
PLASTIC PIPE...

Made exactly for Plastic Pipe Sizes. Assure easily-made, efficient, durable connections on every type of installation. Electroplated steel or Brass. *Ask your Distributor, or write for illustrated folders.*



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COUPLINGS TEES
WELL-SEAL ELLS and PRIMING TEES • VENTURI JET ADAPTERS
UNDERGROUND SPRINKLER ELLS AND TEES • WATER MAIN ADAPTERS, ETC.

"MULCONROY *Starts...* WHERE OTHERS *Stop!*"

MULCONROY COMPANY Since 1887
5331 JEFFERSON ST., PHILADELPHIA 31, PA.

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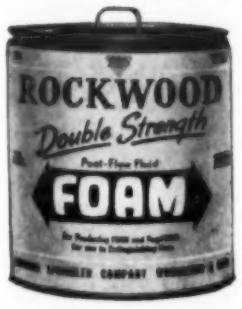
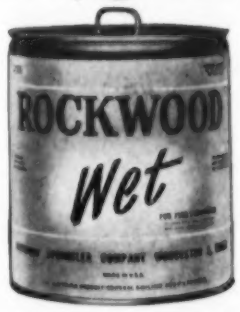
Cut Fire Losses with These Firefighters





Rockwood Double Strength FOAM covers burning surfaces faster, seals off combustible vapors and flows freely around obstructions — even at sub-zero temperatures. Three parts FOAM mixed with 97 parts water form a foam blanket that re-seals if broken. Because it's concentrated, FOAM saves storage space and shipping costs.

Rockwood WET increases firefighting action of water, is a great aid in putting out deep-seated fires involving combustibles such as wood, paper, cloth. Also excellent wherever water is scarce. With WET, rekindling is reduced.

Use Rockwood's FOAM Eductor and Type SG-60 Nozzle for introducing these firefighting liquids into your hose lines. For complete details, write for free, illustrated Rockwood catalog, "Fire Fighting Products." Distributors in all principal cities.

ROCKWOOD SPRINKLER COMPANY
Engineers Water . . . to Cut Fire Losses
348 HARLOW STREET, WORCESTER 5, MASSACHUSETTS

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Model 1AM Up to ⅙ HP — only 2½" dia., weighs 1½ lbs.

Model 2AM Up to ½ HP — weighs approx. 5¼ lbs.

Model 4AM Up to 1 HP — only 5¾" high (less muffler).

Model 8AM Up to 4 HP — only 6½" high (less muffler).

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see our catalog in PRODUCT DESIGN FILE or write for copy

solve tough original equipment problems

Just one of these ten inherent advantages of Gast rotary Compressed Air Motors may solve knotty problems on your original equipment applications.

1—Low first cost. 2—Explosion-proof safety. 3—Variable speed. 4—Can't burn out from overloads or stalling. 5—Four vanes — instant starting. 6—Amazing compactness for HP. 7—Light weight —to ¼ of electric motor. 8—Smooth rotary-vane ball-bearing performance. 9—Reversible models. 10—Dependability for long service.

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(TO 4 H.P.) (TO 30 LBS.) (TO 28 INCHES)
GAST MANUFACTURING CORP., 115 Hinkley St., Benton Harbor, Mich.

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For more details circle NED-817 H4 on enclosed inquiry slip

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. . . BOWSER XACTO METERS

Wherever precision measurement is essential to assure constant uniformity of product—control costs, or simplify handling of liquids—there you will usually find Xacto meters on the job.

Right now—in many plants of all types—Bowser Xactos are efficiently handling 662 different liquids.

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REVOLVATOR
GO-GETTER
Lift Efficiency
Door-To-Door Warehouse Handling Efficiency

For the efficient flow of goods within and without a plant—from production to storage—to shipping—there is no lift truck on the market today that surpasses the Revolvator Go-Getter line.

Illustrated above is the high lift model Go-Getter—a favorite of the food producers—accepted throughout all industry. In 2000-3000 lb. capacities—remarkably adept in narrow aisle work, the Revolvator Go-Getter high lift truck permits great economies in warehousing.

Write for the full facts today.

REVOLVATOR CO.
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For more details circle NED-819 H4 on enclosed inquiry slip

New Literature & Catalogs

Spray Booths

Newcomb-Detroit Co.—Roto-Wash spray booths in both standard and heavy-duty models are covered in 12-page illustrated bulletin 4938-B. They are designed to eliminate paint-fog in the booth between spraying cycles and to prevent over-spray from swirling back into the working area. How these effects are achieved is shown in bulletin, and information is also provided on specifications and other features of units.

For more details circle NED-820 H4 on enclosed inquiry slip

Carbide & Abrasive Point Shapes

Metal Removal Co.—Tool shape identification wall chart illustrates in actual size the various shapes and sizes available in line of carbide burrs and abrasive mounted points. Also shown are tables on tap drills, twist drill and steel wire gage and decimal equivalents. Chart measures 35 x 24 in.

For more details circle NED-821 H4 on enclosed inquiry slip

Balancing Machines

R. B. Annis Co.—Series of three illustrated data sheets deals with under-drive balancing machines for balancing motor-blower wheel and similar assemblies, single-plane balancers and special-purpose balancing machines. Specifications and other data are provided on the various models.

For more details circle NED-822 H4 on enclosed inquiry slip

Tap Drill Selection

National Twist Drill & Tool Co.—"Drilled Holes For Tapping," a well-illustrated 24-page technical manual, is a guide for the correct selection of tap drills. The various factors which enter into the production of a clean, round, straight hole of the correct diameter are discussed in detail.

For more details circle NED-823 H4 on enclosed inquiry slip

Spiral-Wound Gaskets

United States Gasket Co.—Ajax spiral-wound gaskets for pipe flanges; boiler manholes, handholes and tube caps; water walls and special processing vessels are covered in illustrated catalog AG-953. Types for raised and smooth face, crane-lap, Van Stone and male and female joints and for flange unions and tongue and groove fittings are shown.

For more details circle NED-824 H4 on enclosed inquiry slip

Pallet Loading Machine

Alvey Conveyor Mfg. Co.—Series 200 automatic pallet loading machine is covered in 8-page illustrated bulletin. Machine handles individual cartons not exceeding 24 in. square on pallets limited in size to 48 x 48 in. It permits many different loading patterns to be followed, either with column piling or interlocked tiers. Operating principle, features and specifications are given.

For more details circle NED-825 H4 on enclosed inquiry slip

Heat & Corrosion-Resistant Castings

International Nickel Co.—"Heat Resistant and Corrosion Resistant Alloy Castings in Industry" is title of 48-page illustrated bulletin A-141. It covers such factors as comparative alloy creep strengths, corrosion and oxidation resistance. Typical compositions are also discussed as regards applications, limitations and types of service for which they are suitable.

For more details circle NED-826 H4 on enclosed inquiry slip

Automatic Chucking Machine

National Acme Co.—The 12-in. universal model MC single spindle automatic chucking machine is subject of 8-page bulletin MC-53. In addition to regular drilling, turning and forming on seven independently cammed toolslides; self-opening dies, collapsible taps and other attachments can be used on machine. Entire cycle including speed and feed changes, is automatic.

For more details circle NED-827 H4 on enclosed inquiry slip

Precision Resistors

Campbell Industries Inc.—Technical data bulletin describes Fixtohm 1 per cent tolerance deposited carbon precision resistors. Available power ratings range from ⅛ to 2 w and resistance from 10 ohms to 100 megohms. Performance test results, electrical and mechanical characteristics, construction details and protective finishes and enclosures available are all detailed.

For more details circle NED-828 H4 on enclosed inquiry slip

PROPELLER FANS

Whether you want ventilation of process or working areas—ventilation of entire plants or warehouses—or exhaust service under special conditions of heat and corrosion—your best disk fan buy is "Buffalo"! Write for Bulletin 3865 on the sturdy new NV-BREEZOS (8" to 24" sizes for free-air delivery or up to ½" s.p.) Also request bulletin F3790 on NV-Heavy Duty Breezo FANS (24" to 120" sizes) and BELT-AIR FANS (also in 24" to 120" sizes for capacities up to 250,000 cfm).

BUFFALO FORGE COMPANY
215 MORTIMER ST. BUFFALO, NEW YORK
PUBLISHERS OF "FAN ENGINEERING" HANDBOOK
Canadian Blower & Forge Co., Ltd., Kitchener, Ont.
Sales Representatives in all Principal Cities
For more details circle NED-829 H4 on enclosed inquiry slip

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PLASTIC CLOSURES
—the inexpensive way to protect valuable parts during shipment

Use them to—
- Protect threads
- Keep out dirt and moisture
- Seal in lubrication or hydraulic fluids

S.S.White plastic plugs and caps can save you thousands of dollars in damage, complaints and rejections—at the cost of only a few pennies! Use them to cover openings and fittings before shipment. They're quickly and easily applied—and won't shake loose during transit.

They're available in both threaded and unthreaded types and in a range of sizes and styles to meet every need.

LET US QUOTE YOU ON YOUR REQUIREMENTS

We can quickly fill your order from stock and are prepared to make up special sizes when required.

GET FULL DETAILS

Bulletins P-5203 and P-5312 have full information. Write for free copies. Dept. 7P

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DENTAL MFG. CO.
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NEW YORK 16, N. Y.
Western District Office • Times Building, Long Beach, California
For more details circle NED-830 H4 on enclosed inquiry slip

for MAGNETIC SEPARATION of

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If you handle powdered or granular materials in your processes—or sell such materials—FRANTZ FERROFILTERS will help eliminate losses and complaints due to iron contamination. Insure high quality of product by removing this source of trouble. And you can reduce maintenance by extracting those ferrous particles which cause damage to equipment. For complete information . . . .

S. G. FRANTZ CO., Inc.
P. O. Box 1138, Trenton 6, N. J.

Send for BULLETIN 56-E

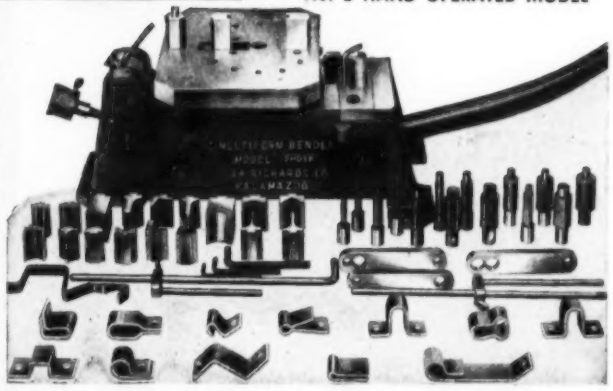
▲ For more details circle NED-831 H4 on enclosed inquiry slip ▲

THE FAMOUS MULTIFORM BENDER CUTTER

Produces Without Special Tooling—Saves Die Costs Saves on Expensive Presses

This efficient machine is useful in all lines of trade, spring plants, radio and electrical equipment manufacturers. Complete with tooling, for bending material up to ⅛" x 1½".

No. 5 HAND OPERATED MODEL



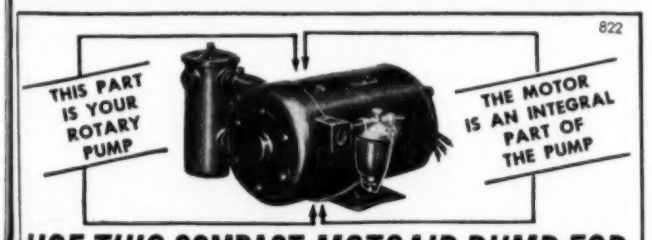
AIR OPERATED MODELS AVAILABLE IN THIS AND LARGER SIZES

FIVE-IN-ONE-TOOL—ALSO LARGER MODELS
IT BENDS FLAT AND ROUND STOCK INTO ANY SHAPE, CUTS AND PUNCHES FLAT STOCK

J. A. RICHARDS CO. MYRTLE & PITCHER STS. KALAMAZOO, MICHIGAN

▲ For more details circle NED-832 H4 on enclosed inquiry slip ▲

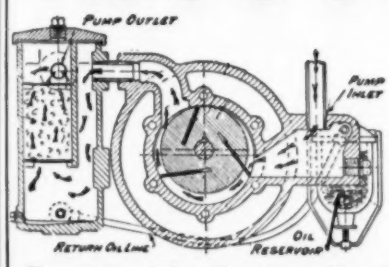
822



USE THIS COMPACT MOTOAIR PUMP FOR

VACUUM

AVAILABLE IN SEVERAL SIZES



No other pump, so compact, provides such dependable vacuum in so little space. Less parts to wear because

NO BELTS
NO GEARS

VISIBLE LUBRICATION

The unique design illustrates points which appeal to machine designers. Used for years on packaging and graphic arts equipment, web-guiding, etc.

Write for Catalog—

NEW JERSEY MACHINE Corporation

FACTORY SALES AND SERVICE BRANCHES
CHICAGO CINCINNATI LOS ANGELES

1550 WILLOW AVENUE, HOBOKEN, N. J.

▲ For more details circle NED-833 H4 on enclosed inquiry slip ▲

New Processes & Materials

NONWOVEN WIPING FABRIC can be rinsed and reused

Washing and cleaning glass, as well as general industrial dusting, wiping and polishing are applications for which Downy Soft Wipers are suited. Wipers are made from an all white, 100 per cent lintless and extremely absorbent nonwoven fabric which is strong enough to be used, rinsed and reused. Relatively low cost also permits disposing of product when soiled. Wipers are offered in 18 x 36-in. and 36 x 36-in. pieces. They are shipped in cartons of 25 lb, loosely packed to retain downy soft finish. Made by **Leshner Corp.**, Dept. NED, Hamilton, O.

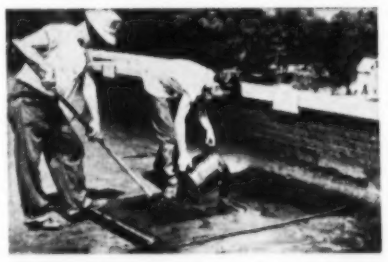
▲ For more details circle NED-834 H4 on enclosed inquiry slip ▲

METAL PRIMER converts rust film to phosphates

Applied directly on rusted areas, KIP 100 priming compound converts the oxide film into absorbent, inert and stable phosphates. It is suitable for use in the many construction and maintenance operations where sandblasting is impractical. Phosphate coat forms a good bond for subsequent painting and inhibits further rust formation under the paint. Made by **Emjay Maintenance Engineers,** Dept. NED, 327 Union Ave., Rutherford, N. J.

▲ For more details circle NED-835 H4 on enclosed inquiry slip ▲

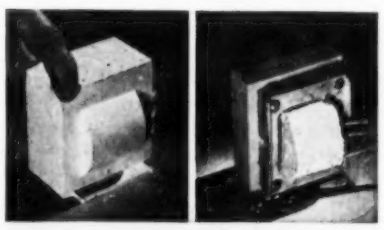
ROOF RESURFACING PROCESS glass fiber mesh provides strength



One-coat roof resurfacing and repair process is based on glass fiber mesh which is bonded to the roof by silicone base waterproofing and adhesive compound. Glass fiber mesh can be laid right over the old roofing. It is then coated with Rufferseal which flows through to bind with surface below. It is immune to rot, decay and dampness, and is also lightweight with good tensile strength. Mesh is available in reels of 4, 6, 12, 36 or 45-in. widths. It is extremely flexible and is easily fitted around corrugated surfaces, pipes and into sharp corners. Suitable also for localized spot repairs, mesh can be applied even during a driving rainstorm when used with Wet Surface Rufferseal sealing compound. Process developed by **Monroe Co.,** Dept. M-1, 10703 Quebec Ave., Cleveland 6, O.

▲ For more details circle NED-836 H4 on enclosed inquiry slip ▲

DIELECTRIC COATING for extreme temperature components



Having a silicone rubber base, Silastic S-2007 resilient dielectric coating is formulated for extreme temperature electric or electronic components. It cures in 2 to 4 hours at 200° C to form a rubberlike jacket which is uniform, heat-stable, moistureproof, and highly resistant to oxidation, ozone and weathering. Coated with this material, transformers pass moisture resistant and low temperature flexibility requirements of MIL-T-27 grade 1. Coating also has high thermal conductivity for cool operation at high temperatures. It can be applied by dipping, vacuum impregnating, or can be molded in fitted encapsulating molds. Normally white, it can be tinted to desired shade with heat-stable pigments. Made by **Dow Corning Corp.,** Dept. IS, P. O. Box 592, Midland, Mich.

▲ For more details circle NED-837 H4 on enclosed inquiry slip ▲

LOCKER HANDLE Latest Style!

Berger Key-Control Steel Locker Provides Automatic Safety

The key is the only handle required to open this revolutionary new steel locker by Berger. Remove the key, and the door pre-locks *automatically.* Close the door and the user gets instant, full-time protection for his personal property. He never again has to rely on memory for locker security.

Key-Control eliminates handle maintenance, reduces unnecessary noise. And only Berger offers Key-Control—plus the largest selection of steel lockers. Get all the facts from your Berger representative, or write us direct for details, specifications and quotations.

REPUBLIC STEEL CORPORATION
BERGER MANUFACTURING DIVISION
1084 Belden Ave., Canton 5, Ohio • Export Dept.: Chrysler Bldg., New York 17, N. Y.

▲ For more details circle NED-838 H4 on enclosed inquiry slip ▲

How To Mark Name Plates In 1/5 the Time

Cutting costs in these times is a good trick if you can do it. You can, on plates requiring detail marking, by using an Automark Electric Metal-Marking Typewriter. The operator lightly touches the key and the Automark does the rest, quickly and automatically. No dial to turn—no lever to pull. Marking output is increased five times and worker fatigue is greatly reduced. Write today for Bulletin 8-16.

AUTOMARK
Electric Metal-Marking
TYPEWRITER

Manufactured Exclusively By

AGENTS
Desirable territories open for responsible representatives. Write giving complete information, lines carried and territory covered.

DEFIANCE MACHINE & TOOL COMPANY
1928 South Vandeventer Ave. • St. Louis 10, Mo.

▲ For more details circle NED-839 H4 on enclosed inquiry slip ▲

HOW YOU CAN SAVE with ISOMODE* PAD vibration control

A standard, economical package of ten ISOMODE* PADS provides vibration control for as much as 80 tons of machinery—enough to demonstrate that you can save four ways:

1. Save bolting or lagging—machines stay put on any type floor.
2. Save workers' energy—noise levels go down.
3. Save through increased efficiency—vibration won't interfere with nearby equipment or offices.
4. Save maintenance—there's less strain on machines, less building damage.

And all at small cost!, Simply cut to size—no waste. Write for price data and application bulletin No. 415.

*Trade Mark

THE MB MANUFACTURING COMPANY, INC.
1066 State Street, New Haven 11, Conn.

▲ For more details circle NED-840 H4 on enclosed inquiry slip ▲

Protects hydraulic circuits

Denison Surge Damping Valve prevents hydraulic shock...eliminates damage to fittings, lines, seals and equipment.

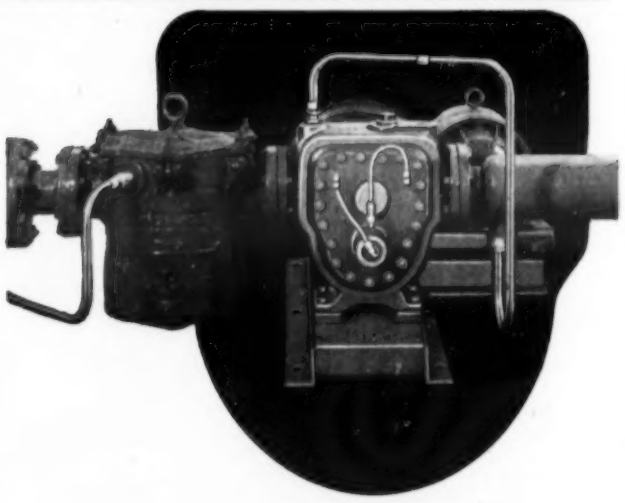
For any circuit up to 5000 psi.

Surge Value Bulletin tells how it works. Send for your free copy today. Write to: THE DENISON ENGINEERING COMPANY, 1151 Dublin Rd., Columbus 16, Ohio.

DENISON Hydr OIL ics

PUMPS • MOTORS • CONTROLS • PRESSES

▲ For more details circle NED-842 H4 on enclosed inquiry slip ▲



Gives Asphalt the HOT FOOT

The Model SD Kinney pump has the high suction and rugged construction to unload or transfer high melting point, or low penetration asphalts at cooler temperatures than other rotary pumps.

This installation consists of a steam-jacketed Kinney Pump and Strainer connected to a jacketed piping system manufactured by the Parks-Cramer Co. of Fitchburg, Massachusetts. All piping, valves, and fittings are jacketed for steam or hot oil heating to eliminate plugged lines and to assure free pumping under all conditions.

For handling liquids hot or cold, choose a Kinney Model SD Pump to speed the job. There are over 40 models with displacements from 1½ GPM to 3,000 GPM, for working pressures from 70 to 250 psi, depending upon pump model and type of liquid. Send coupon for complete details. Kinney Manufacturing Division, Boston 30, Mass. Representatives in principal cities of the United States and foreign countries.

Kinney

KINNEY MFG. DIVISION
THE NEW YORK AIR BRAKE COMPANY
3612 WASHINGTON STREET • BOSTON 30 • MASS.

Please send Bulletin L-51 describing the complete line of Kinney Liquid Pumps.

NAME _____
COMPANY _____
STREET _____
CITY _____ STATE _____

▲ For more details circle NED-843 H4 on enclosed inquiry slip ▲

New Literature & Catalogs

Fabricated Wire Cloth Parts

Newark Wire Cloth Co.—Large or small parts of any shape can be fabricated from wire cloth of any metal by this company. Facilities available for this service are described in 8-page illustrated brochure. Examples of some diverse types of parts are shown.

▲ For more details circle NED-844 H4 on enclosed inquiry slip ▲

Custom-Fitted Work Platforms

Ballymore Co.—Portable and stationary steel work platforms that are custom-fitted to work requirements are subject of 6-page illustrated folder. Safety and convenience in working at high levels are considerations for use of such units in large equipment repair, production operations and maintenance.

▲ For more details circle NED-845 H4 on enclosed inquiry slip ▲

Industrial Thermometers

American Machine & Metals, Inc., United States Gauge Div.—Extensive line of Gotham industrial thermometers is described and illustrated in 14-page catalog 101. Covered are straight, back angle, incline and recline, side angle, multi-angle, special and submarine thermometers. Specifications of each are given.

▲ For more details circle NED-846 H4 on enclosed inquiry slip ▲

Screw Machine Products

New Britain Machine Co., New Britain-Gridley Machine Div.—Facilities and abilities of this company for making a wide variety of precision screw machine products are detailed in 16 pages of this spiral-bound brochure. Examples of products are illustrated.

▲ For more details circle NED-847 H4 on enclosed inquiry slip ▲

Clutch-Coupling Units

Formsprag Co.—Dimensional data, service factors and application engineering data necessary to specify the right clutch-coupling unit are found in 4-page brochure. Units with 0.4 to 230 hp ratings per 100 rpm are listed.

▲ For more details circle NED-848 H4 on enclosed inquiry slip ▲

Prefabricated Charting Method

Chart-Pak, Inc.—Method of prefabricated charting of statistical charts, organization charts and office layouts is described and illustrated in 16-page brochure. Facsimilies of the pressure-sensitive components are included. These are available in tape form (graph components) and label form (office layout components).

▲ For more details circle NED-849 H4 on enclosed inquiry slip ▲

Automotive Springs

Mather Spring Co. — "The Story of Mather Springs," a well-illustrated brochure of 24 pages, explains in nontechnical terms the care and precision necessary in spring manufacture. Company's early research in use of chrome steel vanadium for automotive springs is related and its leaf spring assembly line of 200 ft is described. Manufacturing operations are described.

▲ For more details circle NED-850 H4 on enclosed inquiry slip ▲

Die Castings

Precision Castings Co.—Integrated facilities and operating functions of this company for producing die castings are subject of 24-page brochure "Die castings . . . Unlimited." Over 75 pictures, drawings and charts explain the die castings processes, including die building, alloying, casting, trimming, machining, plating, finishing and inspection.

▲ For more details circle NED-851 H4 on enclosed inquiry slip ▲

Stopwatches

Clebar Watch Agency—Illustrated and described in 1954-55 catalog are stopwatches for many precision timing purposes. Over 20 stopwatches, timers and chronographs are shown. Design features, including a spare parts compartment, are described.

▲ For more details circle NED-852 H4 on enclosed inquiry slip ▲

Spray Gun Techniques

DeVilbiss Co.—High quality finishes at minimum cost is theme of booklet "Spray Gun Motion Study." Correct procedures for spraying various types of surfaces encountered in production work are described in detail. Correct triggering and continuity of motion are among the points emphasized.

▲ For more details circle NED-853 H4 on enclosed inquiry slip ▲

"Just ASK ME about new angles on finishing!"

"RUBBER-CUSHIONED FINISHING GIVES YOU A COMPLETELY NEW SPEED - AND - PROFIT PICTURE! With Brightboy you can *burr, clean, finish, polish,* in one operation, with time savings of as much as 50%!"

There is a Brightboy abrasive exactly "matched" to your job. You can choose rubber-cushioned Brightboy compounded *either* with ALUMINUM OXIDE or SILICON CARBIDE abrasive grain. And each of these compounds comes in *grain sizes,* ranging all the way from *extra-coarse* to *extra* fine, in *soft, firm* and *tough rubber binders.* You get a completely new concept of finishing, far beyond the range of other methods.

Ask your dealer NOW for Brightboy literature. Advise us if he cannot supply you. Write us on any problem where finishing is involved.

BRIGHTBOY INDUSTRIAL DIVISION
WELDON ROBERTS RUBBER CO.
95 North 13th Street,
Newark 7, N. J.

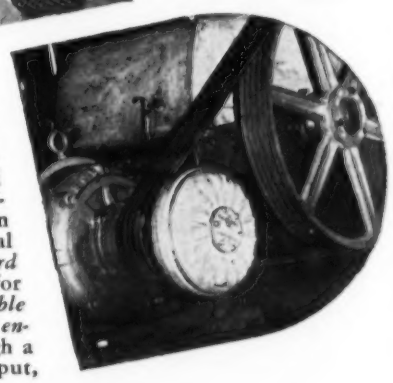
America's Pioneer Manufacturer of Rubber-Bonded Abrasives

WELDON ROBERTS Brightboy RUBBER CUSHIONED ABRASIVES

▲ For more details circle NED-854 H4 on enclosed inquiry slip ▲

TWIN DISC CLUTCHES AND HYDRAULIC DRIVES

Friction Clutches and Fluid Drives



Twin Disc *. . . pioneer in the power linkage field...* offers the *widest variety* of power linkage for industrial equipment, with *standard* model Friction Clutches for fractional to 1325 hp, and *standard* model Fluid Drives for ¾ to 850 hp. *Applicable to all types motor or engine hook-ups,* through a wide selection of input, output combinations.

TWIN DISC

TWIN DISC CLUTCH COMPANY, Racine, Wisconsin • HYDRAULIC DIVISION, Rockford, Illinois

BRANCHES • CLEVELAND • DALLAS • DETROIT • LOS ANGELES • NEWARK • NEW ORLEANS • SEATTLE • TULSA

▲ For more details circle NED-855 H4 on enclosed inquiry slip ▲

Tourek

EXTREME UNIFORM ACCURACY IN SCREW MACHINE PRODUCTS

Critical Buyers Are "Turning To Tourek"

More and more critical buyers "TURN TO TOUREK" *consistently* for finer quality in SCREW MACHINE PARTS. They know these better parts cut assembly downtime to an all time low. TOUREK'S vast engineering experience and facilities can be trusted for the kind of service and cooperation you need. Get ideas, suggestions, estimates. Write today!

SEND FOR.. *useful free technical data on TOUREK Screw Machine Products. Use company stationery, please.*

J. J. TOUREK MFG. CO.
ESTABLISHED 1920
1901 SOUTH KILBOURN AVENUE, CHICAGO 23, ILLINOIS

.. UP TO 2-5/8" DIAMETER SINGLE AND MULTIPLE SPINDLE MACHINES ..
THREADING • TAPPING • MILLING • DRILLING • GRINDING • POLISHING • PLATING • HEAT TREATING • SILVER SOLDERING

WORLD'S LARGEST MANUFACTURER OF BALL JOINTS

▲ For more details circle NED-856 H4 on enclosed inquiry slip ▲

NEW MORSE TORQUE LIMITER

eliminates shear pins

- Torque-adjustable
- Self-resetting
- Tamperproof
- Adaptable

Avoid Machine Dismantling

Eliminate inconvenience, expense and machine downtime connected with resetting shear-pin mechanisms. The Morse Torque Limiter is torque-sensitive, compact and tamperproof. Can be used with sprockets, gears or pulleys. Gives positive protection on machine drives. Automatically slips at overload setting and resets when overload condition is corrected.

Available from stock in diameters from 3" to 10"; maximum ratings from 20 through 628 ft.-lbs.

Get more details. Send today for Morse Catalogue C 14-54.

MORSE CHAIN COMPANY
7601 CENTRAL AVENUE
DETROIT 10, MICHIGAN

MORSE BW MECHANICAL POWER TRANSMISSION PRODUCTS

For more details circle NED-857 H4 on enclosed inquiry slip

DESIGNED TO MEET EXCEPTIONAL DEMANDS

ALCO-LITE
TYPE LDL
DeLuxe Heavy Duty
EXTENSION LADDER

All the acknowledged advantages of aluminum are combined in this ladder of exceptional strength and exceptional ease of handling. The corrugated non-slip rungs are permanently mounted by the exclusive ALCO-LITE embossed gusset and expansion bushing construction. Seven sizes, from 18 ft.to 36½ ft. Complete with locks, pulleys and ropes.

MEMBER: METAL LADDERS ASSOCIATION

ALCO-LITE ALUMINUM LADDERS
ALUMINUM LADDER COMPANY
346 CARBIS STREET • WORTHINGTON, PENNA.

For more details circle NED-858 H4 on enclosed inquiry slip

FIRST THING WE CALL FOR... on any job!

IS OUR **WHEELER**
SOUND POWERED
Electric TELEPHONES

- NO BATTERIES. No outside power.
- LOW in FIRST and LAST COST.
- CLEAR SPEECH. CLEAR SIGNAL.
- ALWAYS READY IN EMERGENCY.
- No electrical hazard.
- UP TO 12 stations intercom.
- SIMPLE standard WIRING.
- Corrosion-resistant construction.

Write for full information and prices.

ASK ABOUT NEW EXECUTIVE-TYPE CRADLE PHONE.

Built and Guaranteed by
the WHEELER INSULATED WIRE COMPANY, INC.
Division of the Sperry Corporation • 1108 East Aurora Street, Waterbury 20, Conn.

4WHB4A

For more details circle NED-859 H4 on enclosed inquiry slip

New Processes & Materials

EXTERNAL SOLDER FLUXES
range from mild to highly active

External solder fluxes for diverse applications range from mild noncorrosive rosin type to strong highly active stainless steel type. All provide maximum wetting, rapid fluxing power and a minimum of corrosive after-effects. General purpose fluxes have water soluble residues. All are supplied in quart and gallon bottles, and samples are available in 1-oz bottles. Made by **Alpha Metals, Inc.**, 57 Water St., Jersey City 4, N. J.

For more details circle NED-860 H4 on enclosed inquiry slip

INSULATION MATERIALS
for motors, generators, transformers

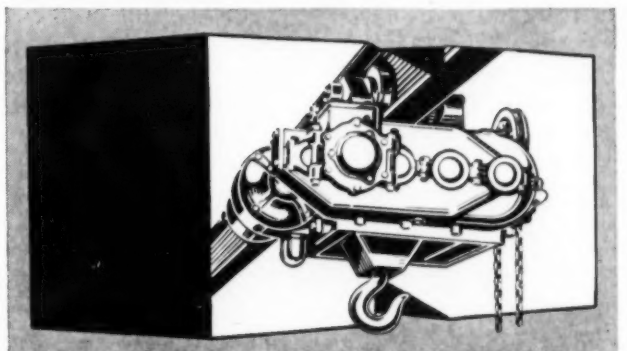
Two insulating materials, NACO insulation and NACO-Mylar combination stock, are offered for motors, generators and transformers. Former is 100 per cent rag base type of vulcanized fiber which has very low density and is relatively inexpensive. It is available in sheets, rolls and coils up to 1/32-in. thick. Latter product is standard insulation combined with Mylar, a DuPont polyester film, for high dielectric strength and toughness. It is intended for motor slot and transformer use. The Mylar film can be applied to one or both sides of insulation in thicknesses from 0.0005 to 0.005-in. Developed by **National Vulcanized Fibre Co.**, Dept. NED, Wilmington, Del.

For more details circle NED-861 H4 on enclosed inquiry slip

REINFORCED CONVEYOR BELT
wire inserts limit ripping

Ribbons of high tensile steel wire inserted at intervals up to 3 ft in this rubber conveyor belt prevent accidental rips from running entire length of belt. First developed for foundry shake-out service, belting is offered now in variety of types, including hot material conveyor belts. Wire ribbons are positioned beneath first fabric or cord ply and extend across width of belt. Belt life has been increased up to 50 per cent. Made by **B. F. Goodrich Co.**, Industrial Products Div., Dept. E, 500 S. Main St., Akron 18, O.

For more details circle NED-862 H4 on enclosed inquiry slip



NORTHERN HI-LIFT
Heavy Duty Hoists

Precision built for dependable, general purpose, heavy duty service. Capacities from 2 to 15 tons in standard I-beam, monorail, lug suspension or base mounted types. Bulletin H-112.

NORTHERN ENGINEERING WORKS
210 CHENE ST., DETROIT 7, MICH.

For more details circle NED-863 H4 on enclosed inquiry slip

"Get Out From Under-"

Federal "J" Siren cuts through high noise levels to save lives!

You never know when a cable might break or a load might shift. Unless warned, workers on the craneway face swift falling death from above.

Shouting won't do it, nor will an ordinary signal. You need a powerful, distinctively high-pitched Federal "J" siren...a siren that overcomes intensely high noise levels. The Federal "J" is a heavy duty siren specifically designed for electric cranes and operating long periods of time repeated 24 hours a day. Where heavy duty, high-frequency of operation is necessary — where distinctive, penetrating sound protection can save lives — install a Federal "J" siren.

Write now for Industrial Sirens Bulletin No. 111

FEDERAL SIGN & SIGNAL CORPORATION
Formerly: Federal Enterprises, Inc.
8711 South State Street • Chicago 19, Ill.

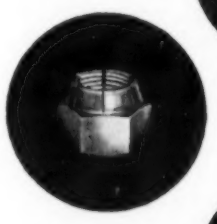
For more details circle NED-864 H4 on enclosed inquiry slip

*12 POINTER

is made in comparable dimensions, in all popular sizes of standard nuts, as well as "Huglock" and "Marsden" locknuts.

SPECIAL ▶

HEXAGON NUTS TO YOUR SPECIFICATIONS



◀ "HUGLOCK"—SELF-LOCKING ONE-PIECE ALL-METAL

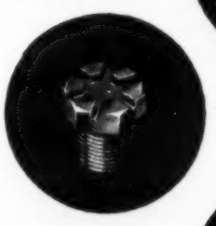
"SEEZ-PRUF" ▶

NON-SEEZING STEEL NUTS FOR HIGH TEMPERATURES

◀ "MARSDEN"—THE FREE RUNNING LOCKNUT

FINISHED & HEAVY ▶

HEXAGON NUTS



◀ "PLACE" BOLTS—ONE-PIECE SELF-LOCKING WITH DIAPHRAGM HEAD

OIL & WATER SEALERS ▶

OIL AND WATER SEALING COMPOUNDS

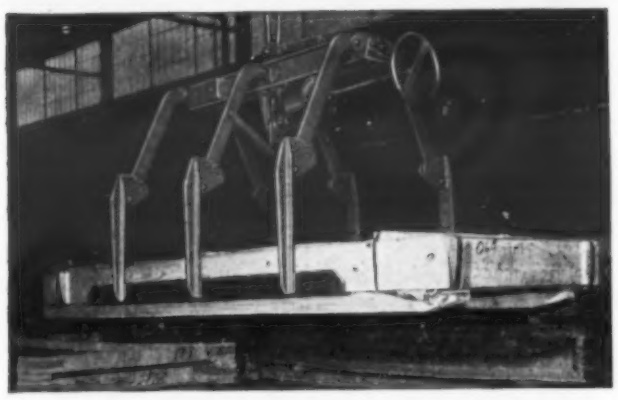
*Here are the types of fasteners that are described in our new 160 page catalog that is on the press. The *24 page, 12 Pointer section which contains complete information, specifications and engineering data, is already available for distribution . . . If you also have need for this type of information, on the rest of our product, we have a limited quantity of the current edition of our general catalog that can be supplied without delay. Please indicate, whether you want the complete catalog or the *12 Pointer Brochure only.*

NATIONAL MACHINE PRODUCTS COMPANY

*Manufacturer of Standard and Special *12 Pointer and Hexagon Nuts..."Huglock" and "Marsden" locknuts.*

44231 Utica Rd., UTICA, Michigan

For more details circle NED-865 H4 on enclosed inquiry slip



HERE'S SHEET HANDLING ECONOMY

No better demonstration of the efficiency, flexibility and economy of C-F Lifters can be made than to watch this 5 ton C-F Lifter handle all sheet steel movement in this busy Chicago district warehouse.

C-F Lifters have quick opening jaws with infinite opening and closing adjustments, permitting them to handle a wide variety of sheet widths—wide bearing angles that safely lift sheets without crimping edges—end control to permit close quarter operation—positive jaw controlling mechanism that holds the jaws open in any position—these and many other exclusive features make C-F Lifters a good investment in materials handling equipment.

C-F Lifters are made in manual and motor operated models in sizes to handle from 2 to 60 tons in standard and semi-special designs.

Write for the Bulletin "C-F Lifters"—it describes the advantages and economies C-F Lifters can bring to your sheet handling jobs.

CULLEN-FRIESTEDT CO.
1304 South Kilbourn Avenue • Chicago 23, Illinois

▲ For more details circle NED-866 H4 on enclosed inquiry slip ▲

ONE QUICK STROKE!

Your load's ready to ROLL . . . with these two new **Weld-Bilt** time savers

Amazingly easy to handle, lighter, smooth-rolling, new low-priced "Pal-Boy" is a great time-saver on single or double pallet loads up to 2500 lbs! ONE swift handle-stroke lifts your load to rolling position. New ball bearing booster rollers on each fork simplifies positioning under pallets. Has many new safety and load-saving features.

NEW "PAL-BOY"
SINGLE STROKE MECHANICAL LIFT PALLET TRUCK

NEW "LO-BOY"
MECHANICAL SINGLE STROKE LIFT TRUCK

Built unusually low, designed for versatility, this easy-moving "LO-BOY" handles *single-faced* pallets as well as standard skids and loads, with "One-Stroke" lifting speed. Light weight, compact, strong, with Automatic Free Handle Release, Handle Safety Spring, Foot Pedal "Jar-Free" hydraulic lowering, and other features. For loads up to 2000 lbs.

WIRE or write for new bulletin and low prices on these new Weld-Bilt SINGLE STROKE time-savers.

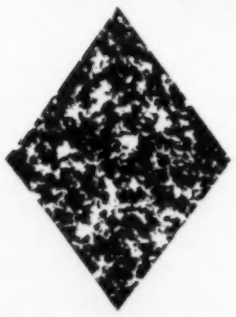
WEST BEND EQUIPMENT CORPORATION
Materials Handling Engineers
311 Water Street, West Bend, Wisconsin.

▲ For more details circle NED-867 H4 on enclosed inquiry slip ▲

THE MOST AMAZING FINISH DEVELOPMENT IN 100 YEARS!

COLOR-FLECKED PLEXTONE®

A textured and MULTICOLORED finish—sprayed at ONE time, from ONE gun, in ONE coat that covers surface flaws completely!



PLEXTONE Albans Granite, one of many standard pre-mixes. Also solids and custom multicolors.

A new lacquer base industrial finish, Color-flecked PLEXTONE combines the new sales appeal of *multicolor* with extreme durability and economy. It resists oil and alcohol, can be scrubbed (even scoured) because color flecks go "through-the-film." Tests show that finishing costs can be cut as much as 35%.

Samples, color chips, technical data on request

MAAS & WALDSTEIN CO.
2116 McCarter Highway, Newark 4, New Jersey
Midwest Division: 1658 Carroll Ave., Chicago 12, Ill.
Pacific Coast Div.: Smith-Davis Co., 10751 Venice Blvd., Los Angeles 34, Cal.

▲ For more details circle NED-868 H4 on enclosed inquiry slip ▲

New Literature & Catalogs

Trolley Conveyor Wheels

Grey Hub Trolley Wheel Co.—Information provided in 8-page brochure covers design and construction of sealed ball bearing trolley conveyor wheels and I-beam trolleys from 1/8 to 5-ton capacity. Wheel features include polished raceways and Du O ring seal employed in addition to standard sealing to keep grease in.

▲ For more details circle NED-869 H4 on enclosed inquiry slip ▲

Set Screw Catalog

Set Screw & Mfg. Co.—24-page descriptive catalog 19 presents technical data, prices and reference information on both conventional and self-locking set screws. Highlights include section on general screw thread data, preview of screws to be marketed and illustration of specially designed set screws.

▲ For more details circle NED-870 H4 on enclosed inquiry slip ▲

Screw Conveyors

Continental Gin Co., Industrial Div.—Engineering data book ID-541 contains material designed to aid in selection of size and type of screw conveyor for any given application. Tables determine proper speeds and horsepowers. Various types of conveyors are fully illustrated and described.

▲ For more details circle NED-871 H4 on enclosed inquiry slip ▲

Industrial Containers

G. B. Lewis Co.—Box trucks, Masonite boxes, stacking, skid and folding boxes are among the industrial handling containers covered in 8-page illustrated bulletin. Standard boxes are available in sizes up to 48 x 28 x 30 in. and capacities up to 1800 lb per box.

▲ For more details circle NED-872 H4 on enclosed inquiry slip ▲

Baskets, Hampers & Trucks

W. T. Lane & Bros., Inc.—More than 89 baskets, hampers and trucks for mill, factory and other industry use are covered in 6-page catalog 3. Thirteen individual styles illustrated include doffing, stacking and general utility baskets; round-taper, elevated and narrow-aisle trucks; and a heavy-duty shipping hamper.

▲ For more details circle NED-873 H4 on enclosed inquiry slip ▲

Printed Circuits

Photocircuits Corp.—Printed circuits, their function, fabrication and application are outlined in 8-page brochure. Piece includes information on methods of application, materials, electrical characteristics and such components as capacitors, resistors, tube sockets, switches, transformers, etc. Assembly with dip soldering and plated-through holes is described.

▲ For more details circle NED-874 H4 on enclosed inquiry slip ▲

Rubber-Covered Factory Doors

American Hard Rubber Co.—Rubber-covered Dura-Dor heavy duty factory door designed to withstand bumping wear of industrial lift trucks is described in 4-page bulletin 52. Door is made of rigid, lightweight plywood, reinforced with sheet steel and completely covered with hide of tough rubber. It is corrosion-resistant and eliminates need for opening devices and bumpers.

▲ For more details circle NED-875 H4 on enclosed inquiry slip ▲

Abrasives & Cutting Tools

Metal Removal Co.—Within 40 pages of "Abrasive and Cutting Tool" catalog are charts suggesting abrasive grain selection and grade recommendations for specific jobs, safe operating speeds for wheel diameters and tool overhang. Selection chart deals with carbide, cast alloy and high speed steel cutting tools. Sizes, shapes and bonds of mounted points, small grinding wheels and segments, plus data on self-adhering flexible disks, are presented.

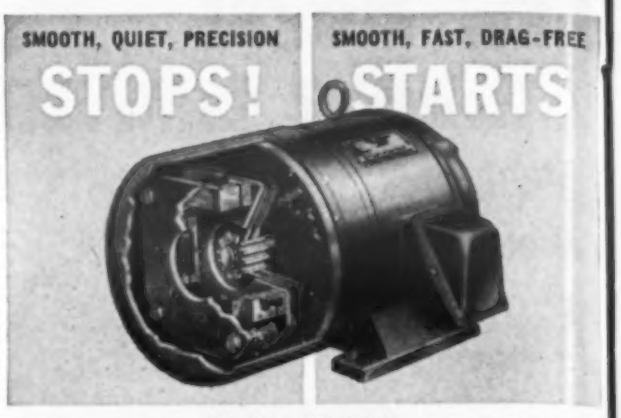
▲ For more details circle NED-876 H4 on enclosed inquiry slip ▲

Metal Cuttng Tools

High production Tri-Bit metal cutting tools, including face and side mills with carbide tipped and high speed steel Tri-Bits (triangular tool bit), are featured in 28-page catalog 53. Data on speeds and feeds, grinding and maintenance, cutter mounting and Tri-Bit specifications for tool layout purposes are also included. Flywheel arbors and adaptors, boring tools, hollow mills and special tools are shown as well. Request on company letterhead to Weddell Tools Inc., 36 Centennial St., Rochester 11, N. Y.

▲ For more details circle NED-877 H4 on enclosed inquiry slip ▲

SMOOTH, QUIET, PRECISION STOPS! SMOOTH, FAST, DRAG-FREE STARTS



THROUGH MILLIONS OF CYCLES WITH STAR-KIMBLE BRAKEMOTORS

Stopping of a Star-Kimble Brakemotor is split-second in action, precisely timed by simple adjustments. Quiet, too — no lining screech. **Starting** is smooth and free from drag — small air gap assures quick brake release. Brake and motor are *designed together to work together as a single* compact unit. Write for Bulletin B-501-A.

Standard and special motors of all types, 1 to 125 hp; generators and motor-generator sets, 1 to 100 kw.; Marine motors, 1/2 to 125 hp.

STAR-KIMBLE
MOTOR DIVISION OF
Miehle Printing Press and Mfg. Co.
214 Bloomfield Avenue Bloomfield, N. J.

▲ For more details circle NED-878 H4 on enclosed inquiry slip ▲

Reduce Tool Handling Time with KELLER BALANCERS

Simplify assembly operations by holding tools in a convenient position over the working area. Bring tools quickly to the work—increase production per man-hour. Reduce tool mistreatment—eliminate damage from dropping.

The Keller Balancer has been redesigned. It has a guide bushing that increases cable life . . . lowers maintenance. It has smoother action . . . requires less effort. Adjustable tension control accurately balances tools up to 20 pounds.

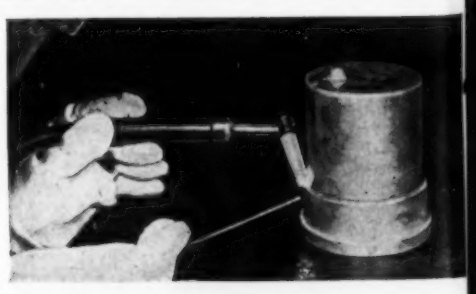
Send for illustrated descriptive bulletin and detailed information

Keller Tool Company
1331 Fulton St., Grand Haven, Michigan

▲ For more details circle NED-879 H4 on enclosed inquiry slip ▲

NEW AIRCO® H12A
WATER-COOLED HELIWELD HOLDER

for only $58.30



This new Heliweld holder gives you quality welds in thin-gauge aluminum, stainless steel, magnesium and copper alloys with ease and convenience . . . and at a highly attractive price. Weighs only four ounces and is 7½ inches long. Continuous duty rating of 125 amps AC or DC. Ideal for long-run jobs, yet welds tight corners without short arcing. Gastight "O"-ring seals in the nozzle and cap assembly. Low price includes holder, collet, nozzle, cap assembly and cable assemblies.

See your Airco dealer, or write today for "Heliwelding Catalog" #2300.

AIR REDUCTION
60 E. 42nd Street
New York 17, N. Y.

Foreign subsidiaries:
Air Reduction Canada Limited
Cuban Air Products Corporation

Divisions of Air Reduction Co., Inc.
Air Reduction Sales Co.
Air Reduction Pacific Co.
Represented Internationally by
Airco Company International

at the frontiers of progress you'll find

▲ For more details circle NED-880 H4 on enclosed inquiry slip ▲

THE Pines principle of bending piping, tubing, extruded or rolled sections and mouldings, employes tested and proven methods that assure best results and peak production. Roll, compression, draw, and stretch bending methods are skillfully adapted to best suit your material and product needs. Hydraulic power, push-button control and automatic operation is combined to assure high efficiency and lower production costs. Ask Pines to analyze your bending problems now.

COST CUTTING FEATURES OF PINES BENDERS

- Produces Accurate Uniform Bends without marking or distorting.
- Push-Button Control — simple, easy for one man to operate.
- Highly Versatile — handles wide variety of work — serpentine, coil, compound or multiple bends.
- Fast Set-Ups — tool changes in 10 minutes.
- Superior Design — tapered alloy-steel spindle, adjustable gibs, Timken bearings, Vickers pump

WRITE FOR FREE LITERATURE
Find out how the Pines Benders are designed to save time and cut costs. Literature describes and pictures various models, attachments, and methods on actual jobs.

PINES ENGINEERING CO., INC.
Specialists in Tube Fabricating Machinery 639 WALNUT • AURORA, ILLINOIS
PRODUCTION BENDING • DEBURRING • CHAMFERING MACHINERY

For more details circle **NED-881 H4** on enclosed inquiry slip

One Stroke =

One Door

Here's A SINGLE PRESS REPLACING A BATTERY OF PRESSES! This internationally known manufacturer uses a 500 ton PACIFIC HYDRAULIC PRESS BRAKE to form refrigerator doors. The first door is DEEP DRAWN in the center, the second is BLANKED on the left and the third FLANGED on the right — 120 COMPLETE DOORS PER HOUR!

This PACIFIC PRESS is designed for high production, yet its flexibility makes it ideal for job-shops. The upper platens are removable, converting it to the most modern press brake on the market. The stroke length is adjustable and the closed-height variable up to 18" with tonnage regulation to match any dies. The ram is repeatedly controlled within thousandths for PRECISION work. It's safe — IT CAN'T BE JAMMED. Investigate now!

PACIFIC INDUSTRIAL MFG. CO.
848 - 49TH AVENUE • OAKLAND, CALIF.

For more details circle **NED-882 H4** on enclosed inquiry slip

SPECIFY *Servisafe* METAL POLE UNITS

for INDUSTRIAL YARD LIGHTING

THOMPSON "Servisafe" units permit rapid, safe, low cost ground-level luminaire servicing and maintenance. These new metal pole units incorporate a patented disconnecting and lowering mechanism and are available in both single and double arm models. They are suitable for use with single pendant luminaires and for multiple floodlight installations. When double floodlights are used, each can be focused independently for maximum efficiency.

Write for Catalog PB-53 for complete details.

1912-TE

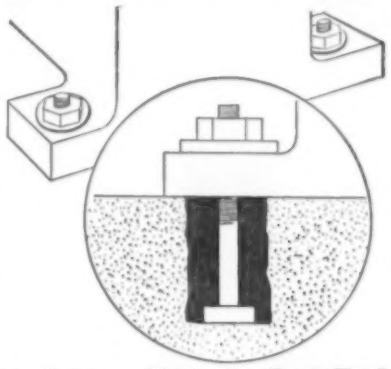
THE THOMPSON ELECTRIC CO.
1138 Power Avenue, Cleveland 14, Ohio

For more details circle **NED-883 H4** on enclosed inquiry slip

New Processes & Materials

QUICK-SETTING CEMENT
patches, anchors and grouts

Anchor bolts can be quickly and permanently secured in concrete by Ankor-Set compound, which is also suitable for patching small holes. Compound fast-cures when mixed with water to form a hard impact - resistant material. Controlled expansion insures a tight bond. Compound sets hard in about 30 minutes. It is unaffected by oils and grease. It is available in 50, 125 and 300-lb fiber drums. Made by **Rock-Tred Corp.**, 7442 N. St. Louis Ave., Skokie, Ill.



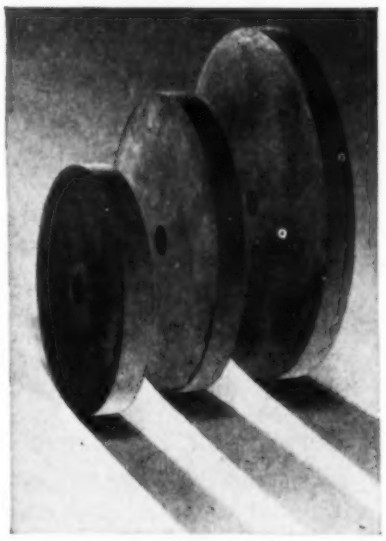
For more details circle **NED-884 H4** on enclosed inquiry slip

SEALING COMPOUND
prevents unauthorized tampering

Unqualified personnel is prevented from tampering with instruments or other equipment and parts by type EC-1252 sealer. Fast-drying compound is applied over the part to be protected, which cannot then be interfered with without breaking the seal. Compound adheres well to aluminum or steel at low or medium temperatures and when dry can be heated to about 200° F for short periods without sagging or loss in adhesion. Made by **Minnesota Mining & Mfg. Co.**, Adhesives & Coatings Div., Dept. NED, 423 Piquette Ave., Detroit 2, Mich.

For more details circle **NED-885 H4** on enclosed inquiry slip

RUBBER-BONDED POLISHING WHEELS
in diameters from 1 to 10 in.

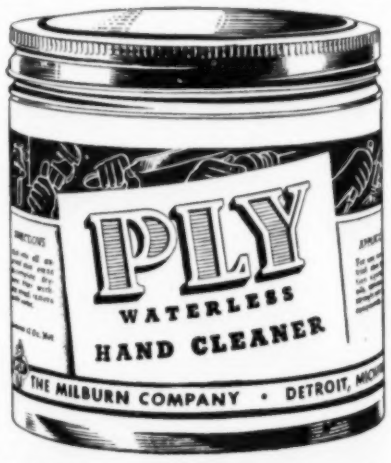


Abrasive grains embedded in resilient bonding rubber make up Sawco polishing wheels which can produce several degrees of finish by simply varying pressure between work and wheel. Resilience in wheel minimizes gouging and excessive wear. Wheels can be shaped to polish grooves, flutes of taps and drills, corners and other hard-to-reach areas. They are offered in diameters from 1 to 10 in. and with face thicknesses from ¼ to 1 in. Made by **Sandusky Abrasive Wheel Co.**, 759 W. Ransom St., Kalamazoo, Mich.

For more details circle **NED-886 H4** on enclosed inquiry slip

WATERLESS HAND CLEANER
combines cleaning with skin care

High cleansing capabilities are combined with soothing effect in formulation of Ply waterless hand cleaner for industrial use. Nonalkaline compound has a ph close to that of average healthy skin, and contains a special emollient to prevent defatting of skin. Product does not contain halogenated or aromatic solvents, gasoline, turpentine or kerosene. It is noninflammable and is harmless to rubber or fabric gloves. Sample available from **Milburn Co.**, Dept. N, 3245 E. Woodbridge St., Detroit 7, Mich.



For more details circle **NED-887 H4** on enclosed inquiry slip

This will help you choose the right Farval system

WHETHER your equipment needs oil or grease—occasionally or frequently—in small amounts or large, there's a Farval automatic or manual centralized system of lubrication designed *right* for the job! Any Farval system is easily installed at any convenient place on or near a machine. Each system includes central pumping unit, two main supply lines, Farval Dualine measuring valve for each bearing and lines connecting valves to bearings.

GET DATA ON THE COMPLETE FARVAL LINE BY WRITING FOR FREE BULLETIN 26

THE FARVAL CORPORATION
3283 East 80th Street • Cleveland 4, Ohio

Affiliate of The Cleveland Worm and Gear Company, Industrial Worm Gearing

For more details circle **NED-888 H4** on enclosed inquiry slip

what are your hardness testing needs?

portability? Only 3" high, weighs 30 ozs.!
versatility? Tests any size, shape, type metal!
speed? One easy motion gives direct reading
easy to use? Just press handgrips, read dial!
production? A test a minute with the bench adapter

Each instrument is individually calibrated. Available in Newage Scales corresponding to:

Rockwell "A" 35-75 Scale
Rockwell "B" 5-100 Scale
Rockwell "C" 6-70 Scale
Rockwell "15N" 70-95 Scale
Brinell Medium 100-440 Scale
Brinell Low 50-260 Scale

ERNST PATENT #2536832.

Thousands in use in industry, labs, government agencies. Write today for full descriptive literature, Booklet 614

NEWAGE INTERNATIONAL portable metal hardness testers
NEWAGE INTERNATIONAL, INC., 235 E. 42 ST., N.Y., N.Y.

LOS ANGELES, CALIF.: 11775 SAN VICENTE BOULEVARD
TORONTO 14, ONTARIO: 3 BESTOBELL RD., QUEEN ELIZABETH WAY

For more details circle **NED-889 H4** on enclosed inquiry slip

Looking for a Better Conveyor? Then You Want This Book

If your conveying problem involves cans, bottles, jars, packages, small parts or almost any other small unit, you'll want this new book on Rex TableTop® Chain. The book explains all the advantages of TableTop's simplicity . . . how it reduces maintenance . . . speeds production . . . helps cut conveying costs.

There are also sections on two other great conveying chains—Rex FlexTop® and Rex PlateTop®. Just use the coupon to send for your free copy today.

REX® Chain Belt COMPANY OF MILWAUKEE

Chain Belt Company 53-102
4686 W. Greenfield Avenue
Milwaukee 1, Wisconsin
Please send me TableTop Chain Bulletin 53-60.
Name.....
Company.....*Dept*.....
Address.....
City.....*State*.....

For more details circle **NED-890 H4** on enclosed inquiry slip

Wickwire rope slings are offered in both braided and single part construction to meet a wide variety of service requirements.

For additional information write to Wire Rope sales office, Palmer, Mass.

WICKWIRE ROPE
PRODUCT OF WICKWIRE SPENCER STEEL DIVISION
THE COLORADO FUEL AND IRON CORPORATION

2015

▲ For more details circle NED-891 H4 on enclosed inquiry slip ▲

RELIANCE SNAP RINGS

SLASH PRODUCTION COSTS and SAVE MATERIAL

AVAILABLE IN
MANY SECTION SIZES AND
VARIOUS GAP DESIGNS

SEND
TODAY FOR
FREE ENGINEERING
BULLETIN 4K/3

EATON

EATON MANUFACTURING CO.
RELIANCE DIVISION
OFFICES and PLANTS • MASSILLON, OHIO
Sales Offices
NEW YORK • CLEVELAND • DETROIT • CHICAGO
ST. LOUIS • SAN FRANCISCO • MONTREAL

▲ For more details circle NED-892 H4 on enclosed inquiry slip ▲

Waltz gives you a complete heat-treating department in a single unit

Waltz CH gas fired heat-treating unit gives you all the advantages of a full scale heat-treating department. Designed for heat-treating all types of oil or water hardening steel . . . for heating, quenching and drawing . . . for stress relieving, normalizing and annealing, with controlled atmospheres.

Features include:

- *Heating Furnace with range of 1000° to 2400° F. automatically controlled (12" wide x 10" high x 18" deep).*
- *Tempering or Drawing Oven is recirculating type. Work is constantly bathed with evenly distributed high velocity and held to constant temperature by automatic control. Alloy steel lined with perforated shelf, has range of 250° to 1100° F. (21" wide x 10" high x 18" deep).*
- *Furnace and Oven doors equipped with foot treadles.*
- *Two Quench Tanks for oil and water. By means of double wall construction, oil tank is entirely surrounded by water for cooling oil, thus producing more uniform quenching.*
- *Automatic electronic type controls.*
- *Shipped ready to install by simply connecting gas and electric power line.*

FREE Engineering bulletins —Waltz Heat-treating Furnace—write:

WALTZ FURNACE COMPANY
Dept. B, Symmes St., Cincinnati, O.

▲ For more details circle NED-893 H4 on enclosed inquiry slip ▲

New Literature & Catalogs

Materials Handling Specials

Kennett Equipment & Machinery Co.—Briefly described and illustrated in 20-page catalog No. 91R are such materials handling specials as pin, dye house, conditioning, platform dolly and round cornered trucks, work boxes, hopper loading trucks, pneumatic tired buggy, rack and shelf trucks, casters and reels for handling gum stock.

▲ For more details circle NED-894 H4 on enclosed inquiry slip ▲

Instrument Transformers

R. E. Uptegraff Mfg. Co.—30-page illustrated catalog 131-000 covers current and potential transformers for both indoor and outdoor applications. Described are models for 15 different applications, with performance data, dimensional drawings, and tables showing cost and weight for various ratings.

▲ For more details circle NED-895 H4 on enclosed inquiry slip ▲

Carbon Steel Welding Tees

Northern Indiana Brass Co.—Available both in standard weights and in extra strong types in pipe sizes from ½ to 4 x 4 x 3 in., Brawny carbon steel welding tees are covered in 4-page illustrated catalog STF-2. Tees are cold formed and have reinforced walls at stress points.

▲ For more details circle NED-896 H4 on enclosed inquiry slip ▲

Roofing Repair & Maintenance

Tremco Mfg. Co.—"Solving Roof Problems" is title of a 36-page illustrated booklet dealing in detail with typical roofing maintenance and repair problems found in all standard constructions. Content headings include "Various type of roofs—Diagnosing roof condition—Planning roof repairs—When to discard built-up roofs."

▲ For more details circle NED-897 H4 on enclosed inquiry slip ▲

Pneumatic Equipment

Gardner-Denver Co.—Compressors, pumps, rock drills and pneumatic tools, air motors and starters, air hoists, mine car loaders and rock drill accessories are among the items covered in general catalog GP-100. Basic information for each product or group of products is given.

▲ For more details circle NED-898 H4 on enclosed inquiry slip ▲

Precision Valves

Marotta Valve Corp.—52-page illustrated catalog "Valves for Aircraft, Guided Missiles, Automotive and Industrial Applications" covers magnetic, check, regulating and special valve types. Each type is described in detail with illustration, installation drawings and flow curves.

▲ For more details circle NED-899 H4 on enclosed inquiry slip ▲

Precision Tools

Erickson Tool Co.—34-page catalog K describes complete line of collet, tap and air operated chucks, tap and floating holders, mandrels, boring bars, speed indexers, special holding fixtures and air cylinders. Specifications are given on model dimensions and ranges, together with data on recommended uses.

▲ For more details circle NED-900 H4 on enclosed inquiry slip ▲

Principles of Centrifugal Pumps

Ingersoll-Rand Co., Cameron Pump Dept.—"Centrifugal Pump Fundamentals" is title of 12-page illustrated manual, designed for use by pump operators and installation and maintenance men. Written in simple language, it explains operating principles, defines various terms used in pump calculations and works out typical pump problems.

▲ For more details circle NED-901 H4 on enclosed inquiry slip ▲

Water Gages

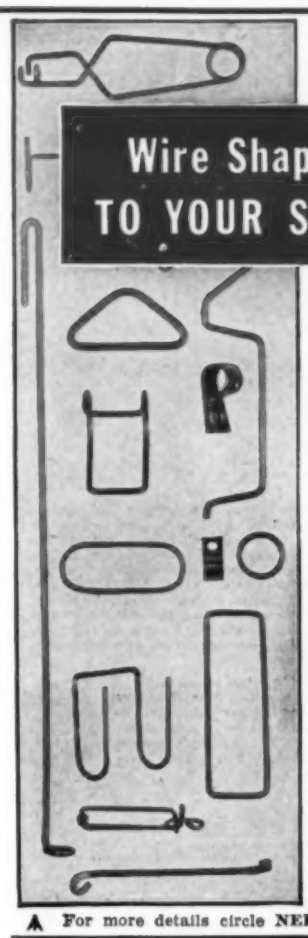
Yarnall-Waring Co.—Yarway boiler water columns and gages, including models for service up to 2500 psi, are covered in 20-page bulletin WG-1812. Major design improvements made in flat-glass high-pressure gages are also described.

▲ For more details circle NED-902 H4 on enclosed inquiry slip ▲

Noncontact Pumps

Sigmamotor, Inc. — Four models of noncontact pumps, which operate by progressive squeezing action of levers on flexible tubing carrying the fluid to be pumped, are described in 8-page illustrated catalog. Pumps are suitable for handling highly corrosive or abrasive media. Largest model gives flow rates up to 275 gph.

▲ For more details circle NED-903 H4 on enclosed inquiry slip ▲



Wire Shapes and Forms
TO YOUR SPECIFICATIONS

● Your wire forms are produced fast, accurately and at low cost with Sommer mass-production methods.

Speedy, automatic plating equipment handles either large or small assemblies. Popular new Zinc Iridite process adds a bright, durable, economical finish.

Sommer offers complete forming, stamping, cut-threading and butt-welding services. Let us work with you in designing and producing any wire shapes or forms needed for your defense contracts. Send sample, blueprint or drawing—see how Sommer can save you time and money.

SOMMER
METALCRAFT
CORPORATION
200 POSTON DRIVE
CRAWFORDSVILLE, INDIANA

▲ For more details circle NED-904 H4 on enclosed inquiry slip ▲

Control Costs!

Print the Weight with New TOLEDOS

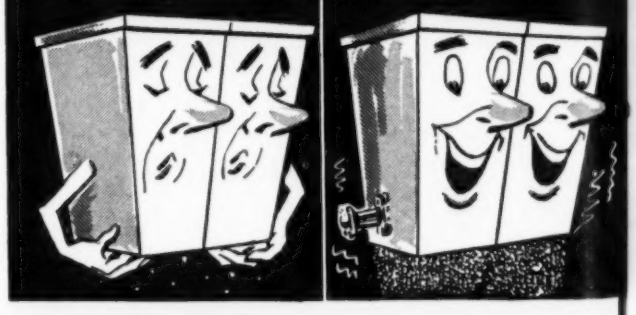
New Toledo Printweigh Scales meet your needs today for *closer cost control!* Stop human errors in reading, remembering, recording . . . provide accurately printed weights with split-second speed . . . *accurately* recorded!

Printweighs are available for dial type scales in the great new line of Industrial Toledos! *44 new features* include . . . new clean-line design . . . double-pendulum mechanism in one-piece sector . . . lifetime fulcrum. Send for new condensed catalog No. 2001. Toledo Scale Co., Toledo 1, Ohio.

TOLEDO.
Headquarters for Scales

▲ For more details circle NED-905 H4 on enclosed inquiry slip ▲

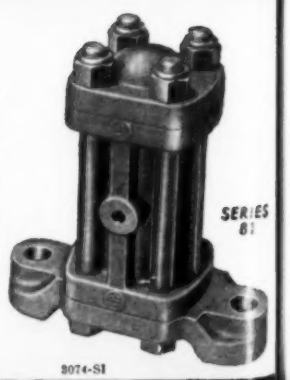
FOR BINS THAT WON'T LET GO



specify SPO air vibrators

Your best insurance against bin stoppage is SPO air vibrators. These low-cost units deliver powerful blows that end jamming, packing and clogging of powdered or granular materials. SPO air vibrators are available in types and sizes to meet all requirements.

Write for Bulletin 50 for complete details



2074-SI

SPO INCORPORATED
6475 Grand Division Avenue • Cleveland 25, Ohio

▲ For more details circle NED-906 H4 on enclosed inquiry slip ▲

"Hamilton Watch Co. counts on AMF DeWalt for all maintenance!"

says Mr. Moses Good, Asst. Maintenance Engineer, Hamilton Watch Company, Lancaster, Pa.

"Our 2 De Walts do all our boxing and crating, and make all the work benches, cabinets and other furniture for our many departments. De Walt® is really versatile, we cross-cut, miter, bevel, compound miter and even do routing jobs sometimes. It's tops for all-around, all-purpose maintenance."

With one low-cost De Walt you'll be able to do just about any maintenance job—quickly ...safely...accurately. Takes up little space—takes the place of many machines.

Send for catalog to AMF De Walt Inc., Dept. NED-54-8, Lancaster, Pa.

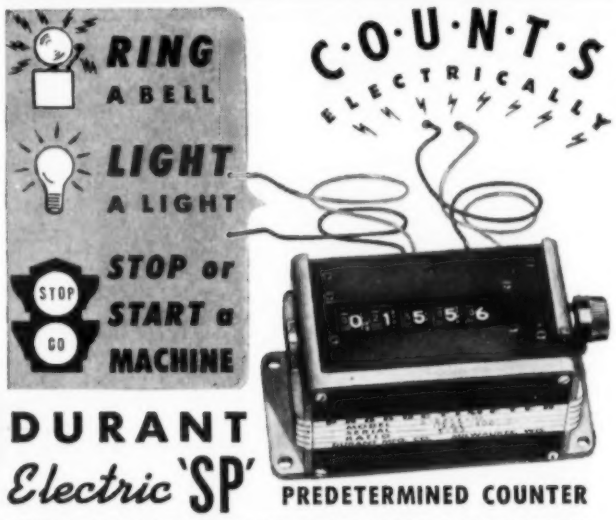
De Walt Inc. Lancaster, Pa.

DE WALT POWER SAWS

In Canada: De Walt Canada Ltd., Guelph, Ontario

Subsidiary of AMERICAN MACHINE & FOUNDRY COMPANY, New York

▲ For more details circle NED-907 H4 on enclosed inquiry slip ▲



DURANT Electric 'SP' PREDETERMINED COUNTER

(COUNTS ELECTRICALLY and CLOSES SWITCH AT END OF PRE-SET COUNT)

Eliminates costly over-runs or time consuming under-runs. Actuated by Photo Electric Cell, Tube, Relay, or Contact Switch. Counter can be located where desired. Predetermined count may be set at any figure to 99,999. Hundreds of applications in all phases of production and instrument work.

SMALL • COMPACT • RUGGED • FAST • ACCURATE

Send for Catalog No. 502

DURANT MANUFACTURING CO.

1922 N. Buffum St. Milwaukee 1, Wis. 122 S. Water St. Providence 3, R. I.

Representatives in Principal Cities

PRODUCTIMETERS 75th ANNIVERSARY

Count Everything

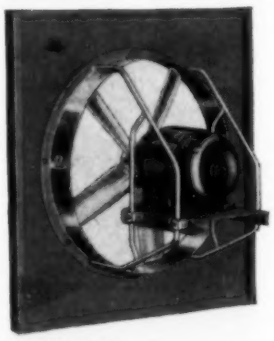
▲ For more details circle NED-908 H4 on enclosed inquiry slip ▲

NEW DIRECT-DRIVEN INDUSTRIAL

Exhaust Fans

SIZES 12" thru 48"... CAPACITIES 900 to 34,200 CFM

- Finest one-piece cast aluminum precision balanced blades.
- Rugged welded steel construction.
- Engineered for horizontal or vertical operation.
- Designed for continuous duty—long life service.
- Easily installed. Virtually maintenance free.



WRITE FOR BULLETIN 500

The complete M & E line includes duct fans, mancoolers, roof ventilators, penthouses and accessory items, belt-driven exhaust fans, and ventilators for hazardous locations.

Distributorships and Manufacturer's Agency Appointments Available

M & E EXHAUST Fans

M & E MANUFACTURING COMPANY

2620 Winthrop Ave. • Indianapolis 5, Ind.

▲ For more details circle NED-909 H4 on enclosed inquiry slip ▲

New Processes & Materials

SOLDERING-BRAZING KIT has 10 different paste alloys

Eight soft soldering alloys and two silver brazing alloys together with dry fuel torch for testing make up this soldering - brazing kit. Each alloy is intended for a specific job, such as soldering electronic components, stainless steel, brazing electrical contacts, and applying carbide tool tips. All that is required in a soldering job is single application of one of the pastes followed by heating by any conventional method. All materials meet one or more of these specifications: U.S. Army 57-97-1, MIL-E-5400, Fed. QQS 561 d, Fed. QQS-571-b and AN-S-62. Kit offered by **Fusion Engineering,** Dept. N, 4504 Superior Ave., Cleveland 3, O.

▲ For more details circle NED-910 H4 on enclosed inquiry slip ▲

WHITE GLUE remains stable, unaffected by cold

High solids content of Master white glue for use in pattern shops and general commercial applications provides peak adhesive qualities and ease of use. Glue remains stable even when stored for long periods and is not affected by freezing. It is packaged in 1-gal flexible plastic bags that are themselves packed in 1-gal cans to assure freshness and prevent contamination. It is also available in plastic-lined 5-gal cans, in 54-gal drums and in a 1-qt plastic Dispenso bottle. Made by **Kindt-Collins Co.,** 12653 Elmwood Ave., Cleveland 11, O.

▲ For more details circle NED-911 H4 on enclosed inquiry slip ▲

GALVANIZED IRON COATING can be covered with other paints

Firm adherence to any galvanized iron or zinc surface is reported for Zincoater, a durable gray coating which will not react chemically with either the galvanized surface or a top finish of paint or enamel. Coating combines metallic zinc dust with phenolic resin vehicle and tung oil. It can be applied by brush, roller or spray and dries to the touch in 2 hours. A gallon covers 700 to 800 sq ft when brush-applied. Available in 1-gal cans, product is packaged in two-compartment container for easy mixing. Unmixed portions remain stable indefinitely. Formulated by **Tropical Paint & Oil Co.,** 1150-1300 W. 70th St., Cleveland 2, O.

▲ For more details circle NED-912 H4 on enclosed inquiry slip ▲

INDUSTRIAL FLOORING is plastic and hardwood combination

Wear resistance qualities are feature of Gam-En-Wood industrial flooring material, which is also unaffected by chemicals, oil and grease. Top surface of U. S. Rubber Company rubber-based plastic is bonded to solid or laminated hardwoods. Flooring is available in either strip or block form. Plastic surface has high abrasion resistance and is nonconductive, fire-resistant, resilient and sound-absorbing. It has good non-slip qualities. This combination of properties makes material suitable for other applications such as non-marring conveyor rolls and truck beds. Made by **Gamble Brothers, Inc.,** Dept. SPG, 4601 Almond Ave., Louisville 9, Ky.

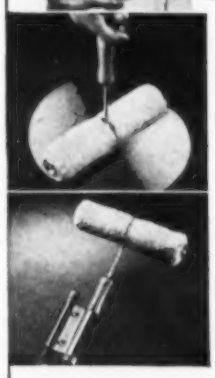
▲ For more details circle NED-913 H4 on enclosed inquiry slip ▲

New 2-Headed Roller

cuts plant painting time 52%

BESTT DUO-MECHANIC Industrial Rollers designed for PROFESSIONAL PAINTERS

New Twin head roller furnished in four sizes!



Exclusive T construction provides perfect balance—cuts fatigue differential action eliminates skid marks. Ideal for fences—concrete—plaster—dry wall construction.

Your order will be shipped through your nearest BESTT DISTRIBUTOR

All covers are 12/16" Lambskin

8"—No. 800 ..... $4.89
11"—No. 1100 ..... 5.40
14"—No. 1400 ..... 6.09
18"—No. 1800 ..... 6.82

Also available in heavy duty model with Hardwood Cores.

Replacement covers available in 7/16"—12/16"—16/16" Lambskin and 7/16"—12/16" Dynel.

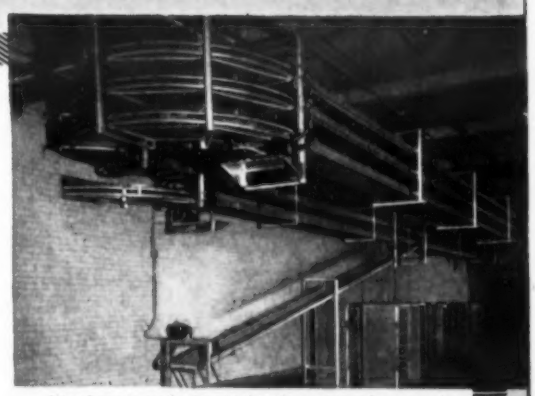
DEPT A

BESTT ROLLR INC. P. O. BOX 551, FOND DU LAC, WIS.

▲ For more details circle NED-914 H4 on enclosed inquiry slip ▲

USP WENDWAY

LIGHT PRODUCT CONVEYORS



Wendway is perfectly suited to the cooling of raw products, packages or containers. This "spiral" system travels the cooling products at ceiling height to conserve valuable floor space.

Cut Handling Costs!

Wendway is the modern, light product conveying system that delivers your product to any place you want it . . . smoothly and silently. Through the wall, upstairs or down, all around the plant. Wendway turns corners, goes down the assembly, packing or shipping room line, or back again, in single file or multiple tiers, runs fast or slow, or switch tracks to another part of the plant. Wendway is really *versatile!* And . . . Wendway saves you money in space, handling costs, convenience and time. It's trouble-free and easy to maintain. Investigate the many Wendway advantages for light product conveying, then see for yourself the many places you could benefit through Wendway's versatility.

This simple, single-tier Wendway system is used to convey fancy packaged nuts from bag loaders through a series of stapling machines and then onto boxing stations.

As fresh sliced cold meat travel by on the Wendway conveying system, the operator labels each type as they proceed to the automatic package wrapping machine.

A typical package conveyor installation, this three-tier Wendway system extends the full length of the shipping dock and carries a steady flow of packages to the waiting trucks.

WRITE TODAY

Gentlemen:—

Please send me complete information about Wendway Conveyor systems as they apply to _____

Name _____

Company _____

Street _____

City _____ Zone _____ State _____

Have a USP Conveyor Engineer contact me at once ☐

USP

UNION STEEL PRODUCTS CO.

ALBION, MICHIGAN

▲ For more details circle NED-915 H4 on enclosed inquiry slip ▲

LET US SHOW YOU HOW TO
CUT WAREHOUSING COSTS . . . as much as 75%
Paltier STORAGE SYSTEM
FLEXIBLE PALTIER
PYRAMID RACK
PALTEAM HARDWARE
DO-ALL BOX
PALLET RACK
PALTIER records are filled with proof after proof of storage cost cuts in the handling of every conceivable type of product. We can cut your storage costs, too!
ASK US:
• PALTIER studies your storage problem—engineers and designs a system for your specific needs.
• Many PALTIER installations pay for themselves "right from the start."
• This booklet tells the PALTIER story, ask for it today.
THE PALTIER CORPORATION 1705 KENTUCKY ST. MICHIGAN CITY, IND.
For more details circle NED-916 H4 on enclosed inquiry slip

LONG LIFE LOW COST PROTECTION
HERE
HERE
HERE
THE SAFELY DRESSED MEN WEAR
SURETY SURESEAL
For neck-to-knees protection against virtually all types of industrial chemicals, you can't beat this ensemble of Surety Patented Turn-Cuff Gloves, Sleeves and Aprons—designed for comfortable fit, freedom of action and maximum protection. In Surety Sureseal (the only gloves made with HYCAR OR15, the super Buna N), the synthetic with highest resistance to the most chemicals, they're tough, snag and abrasion resistant, slow aging for long, low-cost service. Write for informative catalog.
In Canada, Safety Supply Co., Toronto
THE SURETY RUBBER CO. Carrollton, Ohio
For more details circle NED-917 H4 on enclosed inquiry slip

FULL CONE
FLAT SPRAY
HOLLOW CONE
SPRACO NOZZLES
Write for NOZZLE CATALOG to
SPRAY ENGINEERING CO.
106 CENTRAL STREET • SOMERVILLE 45, MASS.
For more details circle NED-918 H4 on enclosed inquiry slip

New Literature & Catalogs

Electrical Maintenance Instrument

Parr Mfg. Corp.—The Brunt Faultfinder, an instrument for electrical maintenance in industrial plants to locate grounds in normally ungrounded electrical circuits, is subject of descriptive 8-page booklet. Information regarding purpose and operation of several models is presented.

For more details circle NED-919 H4 on enclosed inquiry slip

Die-Less Duplicating Equipment

O'Neil-Irwin Mfg. Co.—"Quick Facts to Aid in Selecting Die-Less Duplicating Equipment" are provided in 8-page booklet of this title. It gives a concise summary on both hand and power operated Di-Acro benders, brakes, notchers, punch presses, rod parters, rollers and shears which duplicate parts to die accuracy.

For more details circle NED-920 H4 on enclosed inquiry slip

Power Brushes

C. W. Morris Co.—Application and product data on power brushes for deburring, roughing, stripping, finishing, polishing, grinding, and removing scale and corrosion are provided in 16-page brochure. Illustrated are models up to 15-in. diameter; miniature sections down to 1⅜ in.; and end brushes, including knot, solid filled and circular types.

For more details circle NED-921 H4 on enclosed inquiry slip

Air & Oil Hydraulic Components

Hydraulic Press Mfg. Co.—28-page condensed catalog 1101 is comprehensive guide to entire H-P-M line of air and oil hydraulic components. Sections cover pumps, motors and power units; cylinders; valves; and hydraulic circuit cylinders. Pumps are fixed and variable displacement types ranging from 1 to 185 gpm capacity.

For more details circle NED-922 H4 on enclosed inquiry slip

Valves & Coolant Pumps

Fulflo Specialties Co.—Two 4-page bulletins illustrate and briefly describe oil-relief hydraulic valves and centrifugal coolant pumps, respectively. The bypass, piston type valves are used with oil hydraulic pumps where specific pressure must be maintained. Pressure selection ranges from 0 to 500 psi.

For more details circle NED-923 H4 on enclosed inquiry slip

Trolley Electrification Systems

Feedrail Corp.—40-page bulletin 45 catalogs 60-amp steel-enclosed trolley busway electrification system. Included are new 20-amp trolleys, an enlarged line of standardized curved track sections and other new items. Described are track, trolleys and accessories used in electrification of light tonnage cranes and hoists, assembly and production lines, moving test lines, portable and machine tools, lighting, sewing and cutting rooms.

For more details circle NED-924 H4 on enclosed inquiry slip

Thermometers & Gages

Electric Auto-Lite Co.—Recording thermometers and gages as well as dial indicating thermometers are items described and illustrated in 8-page form G-158-A. Either 24-hour or seven-day mechanical or electric chart drive is available on former. Standard and special bulbs are shown also.

For more details circle NED-925 H4 on enclosed inquiry slip

Heat Exchanger Tubes

Aluminum Co. of America—Factors of low cost and corrosion resistance which make aluminum heat exchanger tubes widely used in industry are emphasized in 24-page illustrated booklet AD-186. Economics of use, types of tubes and explanation of corrosion protection provided by cladding are covered. Successful applications of aluminum exchangers are detailed. Sections are devoted to design data, fabrication and alloy recommendations.

For more details circle NED-926 H4 on enclosed inquiry slip

Magnetic Handling Equipment

Eriez Mfg. Co.—36-page illustrated booklet is concerned with permanent nonelectric magnetic equipment for steel handling and conveying. Comparison is made cost- and labor-wise between this and other methods of steel handling. Possible application of this equipment in skelp mills, continuous and noncontinuous butt weld pipe mills and in sheet and tin mills is dealt with. Classifier magnets, galvanizing dragout rolls and hold down magnets are described.

For more details circle NED-927 H4 on enclosed inquiry slip

YOU SAVE $$$ WITH
EMBOSSED LABELS
NO DIE CHARGE
FOR PRODUCT IDENTIFICATION
AMERICAN STEEL AND IRON WORKS, INC.
WORKING PRESSURE 85 PSIG
TEST PRESSURE 127.5 PSIG
SERIAL NO
MAX. ALLOWABLE TEMP. 650 °F
CAPACITY 575 GAL.
YEAR BUILT 1953
ANY SIZE LABEL
ANY SIZE LETTERS
ANY METAL — INCLUDING STAINLESS STEEL
Raised-letter nameplates to your specifications. Less expensive than comparable etched labels.
Tack-weld, rivet or screw them to your product. Paint or galvanize over them. Wording will remain sharp and clear. Also etched and lithographed labels.
Send Sample or Sketch for Price Quotation
DEPT. C.
TECH PRODUCTS, INC.
442 Mosel Avenue Staten Island 4, N. Y.
For more details circle NED-928 H4 on enclosed inquiry slip

Indicates Density of Piped Liquids — at a glance
Princo Densitrol
A simple, rugged instrument—permanently installed in the pipe line. Gives you continuous sight readings of both density and temperature of flowing liquids such as brine, acids, component solutions and numerous other process materials. Because indicating plummet is totally submerged (unlike hydrometer), there is no surface tension or meniscus effect—thus, readings are easier to make, more accurate. For specifics on calibrations, materials of construction, etc., request Bulletin W-3.*
*Bulletin W-3 also covers models with electrical indicators for use where liquid opacity prohibits sight readings or where automatic temperature compensation, remote indication or actual control of density is desired.
PRINCO Since 1910
PRECISION THERMOMETER & INSTRUMENT CO.
1434 Brandywine Street, Philadelphia 30, Pa.
Makers of precision-built thermometers, barometers, hydrometers, gauges, indicators, mercury in glass thermo-regulators.
For more details circle NED-929 H4 on enclosed inquiry slip

Safe INDUSTRIAL CLEANING COSTS LESS
WITH THE NEW BENNETT Micro-filter AIR-OPERATED VACUUM CLEANER
Fits any standard air hose
The new Bennett Micro-filter Unit has been designed for all types of extremely fine particle separation, hot spark pick-up and a wide variety of high-pressure applications. Its filter sleeve is replaceable at a moderate cost.
Powerful suction — developed by compressed air — makes it adequate for a host of industrial applications in every modern plant where all-around safety and good housekeeping are of importance. It picks up the smallest particles of glass, metals, etc. The Canister is interchangeable with a standard bag or hose for vast number of wet or dry pick-up uses. Complete selection of brushes, hose, nozzles, crevice tools, etc. are available.
NO MOVING PARTS! Unlimited life
COMPACT—POWERFUL! Highly efficient WET or DRY pick-up.
LIGHT—PORTABLE! Body of aluminum casting.
EASY TO OPERATE! Designed to reduce operator fatigue. Hand-operated metering valve.
And, remember, the Bennett is SAFE! It is completely non-electrical. There's no danger of sparking from any moving parts.
ABOVE UNIT, AS SHOWN WITH CANISTER & SLEEVE $39.95
NO ELECTRICAL CONNECTIONS NECESSARY!
M-M-A, Inc., Lancaster, Pa.
For more details circle NED-930 H4 on enclosed inquiry slip

Get More Power
AT NO EXTRA COST

For ALL types of belts—V-Type, Flat or Round. More than 110,000 users.

Machines Respond Quicker Production Rises—Drive Belts Work Efficiently with

BELTRACTION
LIQUID BELT TREATMENT

It is like adding extra production capacity without adding a cent to your investment in equipment when you start using BELTRACTION on your drive belts.

BELTRACTION by stopping costly belt slippage increases driving speeds, raises production per machine and prevents costly shutdowns for repairs. Drive belts are kept clean and pliable—and last longer. Order from your supplier today! Free folder sent on request.

BELTRACTION COMPANY
1817 W. Winona St. Chicago 40, Ill.

FOR ALL TYPES OF BELTS • V-TYPE, FLAT OR ROUND

▲ For more details circle NED-931 H4 on enclosed inquiry slip ▲

Leaking Air
is an expensive luxury

If you can't afford it, HILLS-McCANNA *Saunders Patent* **diaphragm valves will put an end to it!**

WRITE FOR LITERATURE

HILLS-McCANNA
Saunders Patent
diaphragm valves

HILLS-McCANNA COMPANY • 2455 Nelson Ave., Chicago 18, Ill.

▲ For more details circle NED-932 H4 on enclosed inquiry slip ▲

ILLUMINATED MAGNIFIER
for inspection and assembly

Operator has both hands free. Complete unit including adjustable stand, with precision wide-field lens designed for use at "normal" working distance from eyes. $13.50. See complete line of industrial magnifiers $1 to $25, stocked by leading industrial suppliers. Bausch & Lomb Optical Co. 51632 Bausch Street, Rochester 2, New York.

Write today for tell-all handbook and catalog, "INDUSTRIAL MAGNIFIERS, HOW TO CHOOSE AND USE THEM"

BAUSCH & LOMB
Industrial Magnifiers

▲ For more details circle NED-933 H4 on enclosed inquiry slip ▲

New Processes & Materials

SILICONE POLYMER
for making silicone rubbers

Convenient and easy to handle with conventional equipment, series 400 dimethyl silicone gum can be compounded with many fillers and vulcanizing agents to produce silicone rubbers suitable for a variety of applications. It has a high molecular weight and extremely high viscosity. It is stable in storage, nontoxic and requires no preliminary breakdown. Williams plasticity is 45 mils, specific gravity at 25° C is 0.98. Stocks can be compounded to meet AMS or SAE-ASTM specifications or requirements of military wire and cable insulation. Made by **Dow Corning Corp.,** Dept. IS, P. O. Box 592, Midland, Mich.

▲ For more details circle NED-934 H4 on enclosed inquiry slip ▲

MASONRY CLEANER & NEUTRALIZER
prepares surfaces for refinishing

Preparation of concrete and cement floors and masonry surfaces for sealing and refinishing is simplified with use of Surfa-Etch which cleans, etches and neutralizes in one application. Effervescing action of cleaner "boils out" dirt, grease, oil and soap film from surface pores. Product is scrubbed into surface with either brush or floor machine after first scraping dirt and grease off floor. A three to five-minute rinse with clear water, followed by thorough drying, readies floor for sealer or finish coating. Surfa-Etch can be used without safety clothes or goggles and is fume and odor-free, noninflammable and will not damage metal surfaces. Developed by **Rust-Oleum Corp.,** 2799 Oakton St., Evanston, Ill.

▲ For more details circle NED-935 H4 on enclosed inquiry slip ▲

BARREL FINISHING COMPOUNDS
can be used with all metals

Two barrel finishing compounds can be used with both ferrous and nonferrous metals. Compound 58 is formulated for heavy deburring and grinding operations and is suitable for ferrous parts. Compound 41 is of finer composition and is especially suitable for burnishing brass, zinc, aluminum and copper parts. Made by **Almco Supersheen,** Dept. N, Albert Lea, Minn.

▲ For more details circle NED-936 H4 on enclosed inquiry slip ▲

DIAMOND LAPPING COMPOUND
for extremely high finishes

Diamond particles accurately graded to NBS specifications insure uniform results from Super-Lap polishing paste. Applications include roughing, lapping, polishing, and superfinishing of plastic molds, ceramic parts, carbide dies, cutting tools, plug and ring gages and hardened steel tools. Paste is packed in 18 and 5-gram glass cartridges. Grades include Yellow No. 3, or 8000 mesh, for extremely high superfinishing; Red No. 6, or 3000 mesh, for high finish and medium cutting action; Green No. 9, or 1800 mesh, for good cutting and high luster finish; Blue No. 15, or 1200 mesh, for fast cutting with good luster. Hand syringe-type applicators are available. Formulated by **Acme Scientific Co.,** 1457 W. Randolph St., Chicago 7, Ill.

▲ For more details circle NED-937 H4 on enclosed inquiry slip ▲

Troubled with broken floors?

Fix Them Fast With

SPEED PATCH

without halting traffic

World's finest fastest floor fixer! Simply patch holes and truck over them immediately, no waiting. Ready-mixed. Millions of pounds used regularly by industry. Write for details.

Takes only one minute per sq. ft.

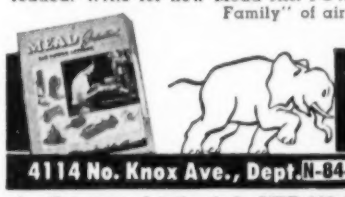
ROCK-TRED Corporation
Manufacturers of a Complete Line of Building Maintenance Materials
7440-7450 North St. Louis Avenue • Skokie, Illinois
In Canada: Rock-Tred Corporation (Canada) Limited, Toronto 3

▲ For more details circle NED-938 H4 on enclosed inquiry slip ▲

Boost Output with MEAD WORK FEEDERS

Feed Work Fast to Drill or Tap!

As-fast-as-you-can-step-on-a-button the sensational new Mead pneumatic WORKFEEDER delivers, holds, ejects small parts to be drilled, reamed or tapped. Accommodates stampings, castings, screw machine parts, etc. Adjustable to sizes up to 3". Foot automatic control; operator's left hand is free to keep hopper loaded. Write for new Mead AIR POWER Catalog describing "Mead Family" of air operated fixtures and devices.



MEAD
SPECIALTIES COMPANY
4114 No. Knox Ave., Dept. N-84-A, CHICAGO 41, ILLINOIS

▲ For more details circle NED-939 H4 on enclosed inquiry slip ▲

REED DU-ALL CHAIN WRENCH

Turns Any Shape...

Works where an ordinary wrench won't!

This new REED wrench does everything a conventional pipe wrench will do, plus a great deal more. It gets into tight corners, close to baseboards or between parallel pipe lines and holds round, square or irregular shapes firmly, without "play" and without crushing. Its fast, ratchet action lets you turn either way from either side. You can tighten and "back-off" without taking the wrench from the pipe. 14", 18" and 24" lengths.

Ask your distributor or write for literature.

REED MANUFACTURING COMPANY
ERIE • PENNSYLVANIA • U. S. A.

▲ For more details circle NED-940 H4 on enclosed inquiry slip ▲

SHELDON
CHICAGO U.S.A.

More will be *profit* with a SHELDON

It actually costs less to do most turning jobs on a Sheldon Precision Lathe. Machine-tool investment is cut to a fraction. Power cost is materially reduced. Less experienced operators can operate Sheldons safely and efficiently. Even cost-loadings for plant—floor space, heat and light are lower because two Sheldons can often operate in the space occupied by one large lathe.

On most "everyday" jobs a Sheldon will actually turn out more pieces per hour too. With double V-belts to the spindle Sheldon lathes deliver enough power to take a healthy bite in direct drive, at really high speeds. Sheldon's "Zero Precision" Taper Roller Bearings permit work to the closest tolerances. Very seldom if ever are such extremely accurate bearings used in other lathes.

You will actually keep more as profit if you use Sheldon Lathes wherever possible.

Write for Catalog

SHELDON MACHINE CO., Inc. 4215 North Knox Ave., Chicago 41, Illinois

▲ For more details circle NED-941 H4 on enclosed inquiry slip ▲

NO COMPETITOR DARES COPY

Your Name Plate

Make it WORTHY Of Your Product

As the maker's "signature," your name plate is one thing that can set your product apart from all others. Make it *distinctive*, and let it reflect the quality you offer.

Let us help you create such a "signature." Our skilled craftsmen, long experience and modern equipment insure finest results. Send a rough sketch or blueprint for design suggestion and quotation.

Write now for "Etched or Lithographed Metal Products," with full color examples of name and instruction plates.

CHICAGO THRIFT-ETCHING CORPORATION
1555 N. SHEFFIELD AVE., CHICAGO 22, ILL., DEPT. U
SUBSIDIARY OF DODGE MANUFACTURING CORPORATION, MISHAWAKA, INDIANA

▲ For more details circle NED-942 H4 on enclosed inquiry slip ▲

Can Veelos V-Belts CUT VIBRATION 20% to 90% in your machines?

Machine vibration is usually caused by one or more of these five factors: bearings; motor; clutch; sheaves; v-belts. Frequently, v-belts alone are the major cause of vibration.

Actual performance on many different types of machine tools has proved that Veelos v-belts can reduce vibration 20% to 90%.

Here's why this is so . . .

Every Veelos belt is *perfectly balanced* throughout its entire length. Every Veelos link and stud is *absolutely uniform*. The *smooth, machine cut sides* and the *laminated construction* of the belt assure full, vibrationless power delivery.

These facts can be readily demonstrated with an electronic analyser. This analyser measures amplitude of vibration to as low as 2-millionths of an inch. A few minutes is all that is required to show you that Veelos runs smoother and creates less vibration than regular v-belts.

Drop us a line for a demonstration with the electronic analyser.

VEELOS THE LINK V-BELT

MANHEIM MANUFACTURING & BELTING CO.
650 Manbel St., Manheim, Pa.

Adjustable to Any Length • Adaptable to Any Drive

Veelos is known as Veelink outside the United States

▲ For more details circle NED-943 H4 on enclosed inquiry slip ▲

New Literature & Catalogs

Coated Abrasives Handbook

Clover Mfg. Co.—Revised edition of "Coated Abrasives" manual contains 36 pages of illustrated data on various types of coated abrasives, their constituents, manufacture and application. In addition to providing a complete picture of various forms of this product, manual also gives hints on best use.

▲ For more details circle NED-944 H4 on enclosed inquiry slip ▲

Automatic Nailer

G. M. Diehl Machine Works, Inc.—12-page illustrated catalog N-454 describes an electronically-controlled and hydraulically-powered automatic nailing machine for making boxes, skids, pallets and high production operations. Nailing speeds are up to 60 strokes per minute. Preselection of any of up to ten nailing combinations can be provided, with up to 24 nails in each combination.

▲ For more details circle NED-945 H4 on enclosed inquiry slip ▲

Water System Valves

Rensselaer Valve Co.—12-page illustrated bulletin M-2 covers gate valves, square bottom valves, check and air release valves and hydrants. Accessories including gearing combinations, bypasses and valve operators are included. Joints as applied to valves and hydrants are also described.

▲ For more details circle NED-946 H4 on enclosed inquiry slip ▲

Safety Relief Valves

Marine & Industrial Products Co.—84-page illustrated loose-leaf catalog No. 82 covers safety relief valves for protection of boilers, compressors, heat exchangers, pressure piping and vessels, process and other equipment. Various models handle all sorts of media and are available in complete size and pressure ranges. Thirty pages of engineering data relative to valve selection are included.

▲ For more details circle NED-947 H4 on enclosed inquiry slip ▲

Testing Instruments

Gardner Laboratory, Inc.—60-page 1954 catalog covers a wide variety of testing instruments and accessories for the paint and other industries. Complete specifications, and price data are given on all items. Included are appearance measuring instruments, paint conditioners, viscosity testers, balances, constant temperature baths, ovens, dehumidifiers and humidity cabinets.

▲ For more details circle NED-948 H4 on enclosed inquiry slip ▲

Contract Machining

Orange Roller Bearing Co., Special Parts Dept.—Facilities for producing machined, hardened and ground parts to specification are outlined in 8-page illustrated booklet. Equipment for screw machining, turret-lathe work, grinding, secondary and finishing work and inspection is covered.

▲ For more details circle NED-949 H4 on enclosed inquiry slip ▲

Drilling Machines

Bryant Machinery & Engineering Co.—12-page illustrated catalog 600 shows Cleereman round and box column drilling machines. Single spindle and high and low base gang drilling machines are included in line. Two series have 25 and 30-in. swing, respectively.

▲ For more details circle NED-950 H4 on enclosed inquiry slip ▲

Industrial Air Power

Mead Specialties Co. — 52-page "Industrial Air Power" catalog illustrates and describes such items as cylinders, clamps, presses, workfeeders, vises, collets, drill press feeds, column presses, timers, impact hammers, valves and other air-operated specialties.

▲ For more details circle NED-951 H4 on enclosed inquiry slip ▲

Honing Applications

Sunnen Products Co.—12-page illustrated bulletin gives case history type information on production parts which use honing in their manufacture. These range from sewing machine components to cylinders. Honing equipment is also covered, and the production rates and tolerances which can be held are explained.

▲ For more details circle NED-952 H4 on enclosed inquiry slip ▲

Small Precision Tools

Swartchild & Co.—Watchmaker type tools for delicate industrial work, including washing and drying machines, precision soldering equipment, tweezers and eye loupes, are covered in available illustrated catalog.

▲ For more details circle NED-953 H4 on enclosed inquiry slip ▲

Order a BRUNT FAULTFINDER today and prevent a shutdown tomorrow

Don't gamble against a ground on an energized power circuit. It can cause a costly production shutdown tomorrow. Only the Brunt Faultfinder can make sure it won't happen. Country's largest manufacturers depend on it. Price $450, express prepaid.

PRINCIPAL FEATURES

- Imposes only 2 amperes on circuit.
- Can be used in dark or noisy locations.
- No pulling of switches or interference with production.
- Locates faults on ungrounded wiring systems up to 550 volts, a.c. or d.c.
- Traces pole line signals without climbing.
- Combination ground detector and fault locator.
- Equally strong signal on open or enclosed wiring.
- No delicate meters or instruments to adjust.
- Compact, durable—easy one-man operation.
- Phase indicator lights visible at distance.

SEND ORDER TODAY

SEND FOR THIS NEW BOOKLET

PARR MANUFACTURING CORP.
40 Austin St.
NEWARK 5, N. J.

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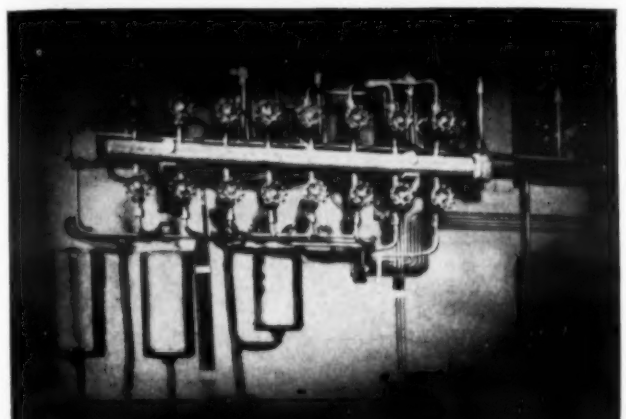

Weatherhead Brass Fittings connect air lines in the Cleveland Electric Illuminating Company's Lakeshore Steam Power Station, Cleveland, Ohio.

Do You Get All This When You Buy Brass Fittings?

- ☐ QUALITY MATERIALS AND MANUFACTURE?
- ☐ PROGRESSIVE DESIGN?
- ☐ SIMPLIFIED ORDERING AND INVENTORY?
- ☐ FIELD ENGINEERING SERVICE?

those who buy WEATHERHEAD do!

N E W S

GET FAST DELIVERY FROM WEATHERHEAD DISTRIBUTORS COAST TO COAST

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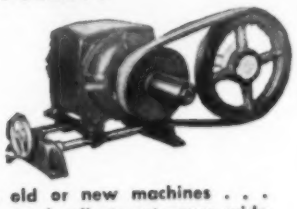
increase machine performance with

LOVEJOY Variable Speed PULLEYS



Quickly, easily installed on old or new machines . . . allowing infinitely variable speed adjustments over wide range. A mere turn of hand instantly, accurately speeds up or slows down the driven unit for changes in production schedules . . . adjustment for operator ability . . . corrections for size or density of stock, temperature or humidity.

Available in 8 sizes—fractional to 10 hp. with ratios to 3 to 1.

Write today for illustrated catalog and complete technical data.

LOVEJOY FLEXIBLE COUPLING CO.
4803 W. LAKE STREET • CHICAGO 44, ILLINOIS
Also Mfrs. of Universal Joints and Flexible Couplings

For more details circle NED-956 H4 on enclosed inquiry slip

BRASS FITTINGS

The Mark of Quality

A guide to the quality of Weatherhead Fittings is their use by America's leading industrial firms. Weatherhead earned this acceptance in the past—and holds it today—by insistence on the best materials, the most careful manufacture, the greatest emphasis on design and engineering.

You can see the results in Weatherhead Brass Fittings. Weatherhead pioneered the technique of machining them from extruded brass to give you strength equal to forgings and complete freedom from seepage. Weatherhead designers planned the large, flat wrench pads for easy gripping. And because Weatherhead's line is complete, you can order from one supplier and carry one inventory for all your requirements.

FOR ALL THE FACTS, get Catalog F-1456. Write: The Weatherhead Company, Dept. F-2, 300 East 131st Street, Cleveland 8, Ohio.

YOU'RE AHEAD WHEN YOU SPECIFY . . .
WEATHERHEAD

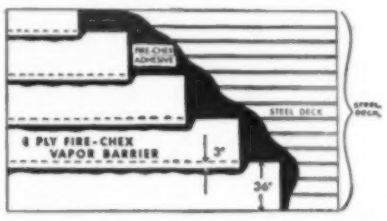
This trademark appears on every make of car, truck, bus, and tractor on equipment for machine tools, diesel and hydraulic applications on equipment for instrumentation, oil drilling, mining, road building for aircraft, railway, and marine engines for LP-Gas and anhydrous ammonia control equipment this symbol represents more than 1500 products made by Weatherhead

For more details circle NED-957 H4 on enclosed inquiry slip

New Processes & Materials

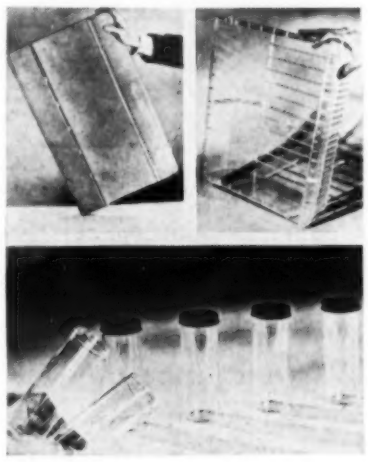
FIREPROOF ROOFING for built-up steel construction

Built-up steel roofing is protected from spreading fire by Fire-Chex asbestos-plastic vapor barrier. Materials form a skeletal mat when exposed to heat. This prevents melted asphalt from flowing through joints in the roof deck. Material can be specified for use with all built-up roofs over steel, including 10, 15 and 20-year bonded roofs. Material is applied with a special adhesive and is available in rolls 38 ft long and 36 in. wide. It weighs 60 lb per square. Made by **Philip Carey Mfg. Co.**, Dept. FF, Lockland, Cincinnati 15, O.



For more details circle NED-958 H4 on enclosed inquiry slip

STYRENE PLASTIC has high plasticity and fast set-up



General purpose SMD - 3500 styrene plastic, developed for use on all types of injection molding machines, flows easily through pinpoint gates and dispersion nozzles. It features qualities of all previous polystyrenes, plus higher plasticity and faster set-up. Ease of flow produces parts that are relatively free from strains and weld lines. Higher plasticity makes possible filling of more cavities and molding of larger pieces using the same cycle and pressure as compared with less versatile general purpose styrenes. Material is available in crystal and colors. Made by **Bakelite Co.**, Dept. NE, 300 Madison Ave., New York 17, N. Y.

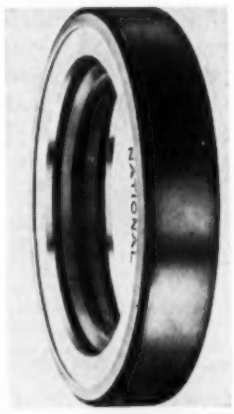
For more details circle NED-959 H4 on enclosed inquiry slip

HOT-FORMING LUBRICANT sprayed on from pressurized can

Prevention of galling and seizing between parts, hot forming operations, as well as wear-in of gears, toggle joints, power screws and reciprocating parts are uses for which Moly-Spray-Kote lubricant is intended. Product is a dispersion of micro-fine solid lubricants, mainly molybdenum-disulfide, in a propellant called Fluron. Carrier is blended for applying uniform lubricant flow to metal surfaces by spraying from pressurized container. It dries quickly leaving solid, adhesive, lubricating film with high chemical and thermal stability and low coefficient of friction at high bearing pressures. Product is noninflammable, noncorrosive, nontoxic and does not contain resin binder. It can be sprayed on hot surfaces. Formulated by **Alpha Corp.**, 177 Hamilton Ave., Greenwich, Conn.

For more details circle NED-960 H4 on enclosed inquiry slip

SEAL SEALER is coating on metal-cased seals



Process providing positive sealing between housing bore and outer case of metal-encased oil seal consists of Redicoat coating material applied on seal's metal circumference. Coating serves as sealer, eliminating need for cement. It is hard to the touch, does not adhere to containers or pick up dirt and is brightly colored for identification. As seal is introduced into press-fit bore, coating fills radial or circumferential scratches as deep as 0.003-in. It is permanent and unaffected by temperatures from −60 to 350° F. Seals thus processed are easily removed after prolonged operation at high temperature. Made by **National Motor Bearing Co.**, Dept. N, Broadway at National Ave., Redwood City, Calif.

For more details circle NED-961 H4 on enclosed inquiry slip

2 Announcing . . . BANDSAWS in 1

The Versatile NEW WELLS 49-A

USE IT AS A VERTICAL BANDSAW

In this position the New Wells 49-A is a Utility Upright Bandsaw for vertical cutting of angles, slots, notches, bevels and contour work. Ample power, efficient (3 speed) V-Belt Drive and sturdy construction assure smooth, even cutting.

USE IT FOR HORIZONTAL CUT-OFF

In this position your dual purpose New Wells 49-A becomes an Efficient, Economical Horizontal Cut-Off Saw that will handle "man sized" cut-off jobs in large or small shops. It's an ideal tool for "job-site" work and handy for maintenance or utility work.

Write today for complete information.

Wells

Products by Wells are Practical
METAL CUTTING BAND SAWS
WELLS MANUFACTURING CORPORATION
1313 HARDING ST., THREE RIVERS, MICHIGAN

For more details circle NED-962 H4 on enclosed inquiry slip

FOR FACTORIES
FOR INSTITUTIONS
FOR COMMERCIAL BUILDINGS

BRADLEY washfountains and multi-stall showers

• Bradley Washfountains—the standard for over 30 years. Serve up to 10 persons simultaneously.

• 5- and 3-stall Bradley Showers are complete units—cut piping and installation costs.

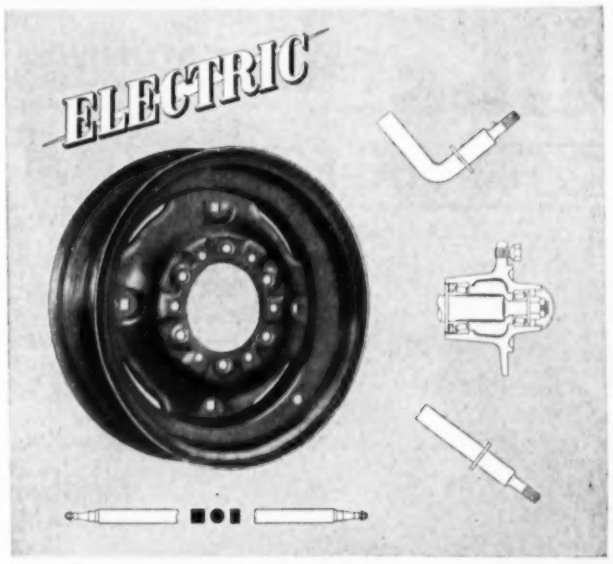
• The Bradley DUO has foot-control too for maximum sanitation. No faucets to touch.

• Made in precast stone, enameled iron and stainless steel; full circle, and semi-circular wall models.

Bradley Washfountains and Multi-Stall Showers provide the utmost in economical, sanitary facilities. Illustrated Catalog 5204 includes complete details and installation suggestions. Write for free copy today.

BRADLEY WASHFOUNTAIN CO.
2253 W. Michigan St., Milwaukee 1, Wis.

For more details circle NED-963 H4 on enclosed inquiry slip



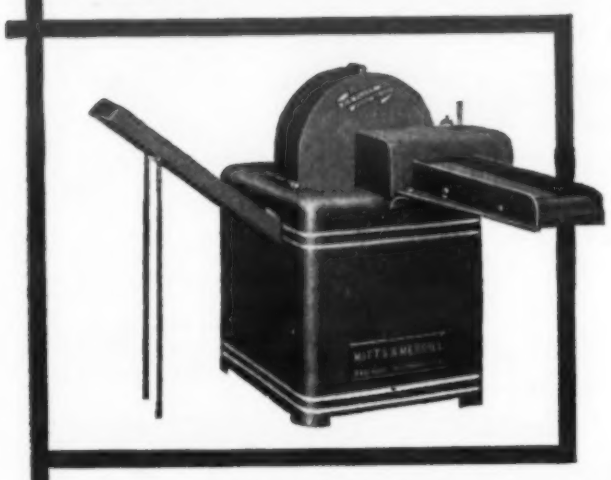
A Wheel for Every Job!

Our engineers will recommend the most efficient and economical wheel and axle assembly for your unit. We invite your inquiries.

WRITE US FOR CATALOG
ELECTRIC WHEEL CO.
2802 SPRUCE, QUINCY, ILLINOIS

For more details circle NED-964 H4 on enclosed inquiry slip

M&M AIR-FLUFF PAPER SHREDDER



The Air-Fluff Paper Shredder is an outstanding machine for use in the commercial manufacture of paper excelsior. Blueprints, letters and confidential records are speedily, safely and efficiently destroyed. Built in 3 sizes ranging in capacity from 200 to 2500 pounds per hour. Each machine can be adjusted to cut widths of 1/8", 3/16", 1/4", or 3/8". Write for descriptive literature.

MITTS & MERRILL
1000 South Water • SAGINAW, MICHIGAN
77

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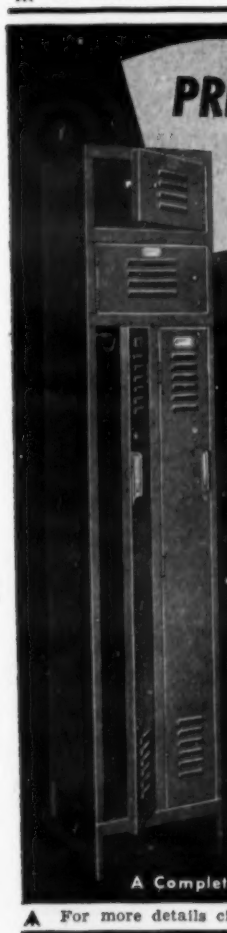
PRIVATE STORAGE in Half the Usual FLOOR SPACE!



Penco Space Maker
2-PERSON LOCKER UNIT

AS MUCH AS DOUBLES YOUR LOCKER FACILITIES!
Each 15" wide x 21" deep all-steel unit provides *two* sets of individual, interlocking hat and coat lockers. Unique design takes up no more area than many single-person lockers! Pays dividends in higher employee morale, efficiency—at low cost per person!

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PENN METAL
Corporation of Penna.
82 Oregon Ave.
Phila. 48, Pa.
86th Year

ENDS- OVERCROWDING INCONVENIENCE LACK OF PRIVACY PETTY THEFTS!

A Complete Line of Steel Lockers, Shelving, Cabinets

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NICE BALL BEARINGS DO BIG JOB FOR IBM

Millions of NICE No. 6083 have been produced to meet the ever expanding use of IBM Machines in industry, commerce and government. Have you investigated the design and cost saving opportunities offered by the NICE LINE?

Circuit breaker unit (actual size) in which NICE No. 6083 bearing is used as the cam following roller on the circuit breaker arm. This unit is typical of those used on several IBM Accounting Machines.

IBM Electronic Calculator Type 604

WRITE FOR NICE CAT. NO. 150

NICE BALL BEARING CO.
NICETOWN • PHILADELPHIA • PENNSYLVANIA

▲ For more details circle NED-967 H4 on enclosed inquiry slip ▲

New Literature & Catalogs

Carbide-Tipped Cutting Tools

North American Products Corp.—Woodsman carbide-tipped saw blades, router bits and hand router tools are subject of illustrated catalog. Information is included to assist in selection of the proper type of blade or cutter. Cutting results which may be obtained in working various materials are explained.

▲ For more details circle NED-968 H4 on enclosed inquiry slip ▲

Exhaust Fans

M & E Mfg. Co.—Direct-connected axial flow exhaust fans, for the exhausting of fumes or cooling of personnel, have their performance charts, specifications and applications covered in 8-page illustrated bulletin 500. Fan selection data are provided. Various models move from 980 to 34,200 cfm.

▲ For more details circle NED-969 H4 on enclosed inquiry slip ▲

Handling Trucks & Tote Boxes

National Vulcanized Fibre Co., Fibre Specialty Div.—Over 40 types of trucks, tote boxes, dolly trucks, trays, utility receptacles, barrels and roving cans of hard vulcanized fiber are described and illustrated in 24-page materials handling equipment catalog No. 54. Trays are of nesting, stacking, straight sided, tapered, reverse tapered and hopper front types.

▲ For more details circle NED-970 H4 on enclosed inquiry slip ▲

Custom Fabricating

Jersey Sheet Metal Products, Inc., Associated Metal Fabricators Div.—"Custom Fabricating for Industry" is title of illustrated brochure which offers production and design engineers ways of increasing production efficiency and lowering costs through automation techniques. Described are industrial ovens, tanks, and winding and racking equipment designed, produced and installed by the company. It visualizes the trend toward mechanized automatic handling of parts in process.

▲ For more details circle NED-971 H4 on enclosed inquiry slip ▲

Miniature Rigid Controls

Arens Controls, Inc.—Uses for miniature rigid push-pull controls include manual reset operation of inaccessible controls, direct transmisson of motion in compact mechanism, power transmission through confined areas and remote indication. Controls are described on 2-page illustrated bulletin No. 32. Engineering drawings and general specifications are included.

▲ For more details circle NED-972 H4 on enclosed inquiry slip ▲

Sitting Down on the Job

Standard Pressed Steel Co.—"Stoolcraft" is title of a 12-page cartoon-illustrated booklet which discusses the art of sitting down on the job in industry. Spiced here and there, the easy-to-read booklet, relates how sitting on Hollowell line of stools and chairs can be of value to the purchaser.

▲ For more details circle NED-973 H4 on enclosed inquiry slip ▲

Calcium Lignosulfonate

Lake States Yeast Corp.—De-sugared calcium lignosulfonate is described in 4-page folder which also contains physical and chemical characteristics of the forest product. List of present uses and suggested applications is also included.

▲ For more details circle NED-974 H4 on enclosed inquiry slip ▲

Hydraulic & Pneumatic Packings

Raybestos-Manhattan, Inc., Packing Div.,—Line of homogeneous V-rings molded to JIC dimensional standards which correspond to AN-6225 sizes is subject of 8-page illustrated brochure. Neoprene base compound is used for low friction, low swelling and high wear resisting rings, while Buna-N is used for rings with high oil resistance and low friction and high wear resistance features. Use can be for pneumatic and hydraulic applications at pressures up to 5000 psi.

▲ For more details circle NED-975 H4 on enclosed inquiry slip ▲

Decorated Trims & Panels

American Name Plate & Mfg. Co.—"Trims, Panels and Escutcheons" is an illustrated 4-page brochure which shows use of decorated metal stampings as functional component parts. It relates that use of stock dies can reduce original tool costs in many cases. Examples covering wide range of products are shown.

▲ For more details circle NED-976 H4 on enclosed inquiry slip ▲

YOU ought to pack with the AUTO-PAK! here's why:

You can package your product for protection, for appearance, for ease in handling with the Auto-Pak . . . the versatile, efficient machine that packages such a wide range of products. The Auto-Pak automatically forms two sheets of heat sealing material (cellophane, foil, kraft, etc.) around the items to be packaged, seals the four sides, cuts off and delivers a completely sealed, attractive package. The unit delivers as many as one package every second in strips, single or double packs. There are no installation costs with the Auto-Pak. Just plug it in and you're ready to package anything from pills to powder puffs . . . quickly, economically, attractively.
Write for details and your free copy of "Unit Packaged For The Assembly Line"—a booklet describing the job the Auto-Pak does for a leading auto manufacturer.

Packaging eye droppers

PAK-RAPID INC.
530 N. 21st Street LOcust 7-4840 Philadelphia 30, Pa.
N. Y. Representative—I. J. White Co., 70 W. Huston St. A14-0180

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STOP WASTING DRILLS!

FREE BOOKLET...
Shows how to prevent excessive drill breakage, vastly prolong drill life . . . and eliminate time wasted by valuable skilled mechanics grinding drills!
Black Diamond's "Positive Positioning" feature positions drill to exact twist you want . . . *automatically*. Now anyone can sharpen and web-thin with scientific accuracy . . . on a Black Diamond Drill Grinder!

WRITE TODAY!

BLACK DIAMOND
SAW & MACHINE WORKS, INC.
72 NORTH AVE. NATICK, MASS.

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MAKE YOUR OWN CRANE... ...at a NEW LOW COST!

Handle loads up to 2000 lbs., SAFELY,
easily... Buy crane beam locally—we furnish the rest... A pair of self-aligning, ball bearing Flexo-Crane trucks cost only..... $119.00
Simple instructions come with shipment.

Complete Flexo-Crane, with hoist and accessories, is also economically priced. To get full details, ask for—
BULLETIN F-132

The Abell-Howe Line includes a wide range of overhead cranes monorails, hoists and accessories.

ABELL-HOWE COMPANY 53 W. JACKSON BLVD. CHICAGO 4, ILL.

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It's New!

A TRUCK DESIGNED for Cartons

Handles ½-¾ and full keg size cartons and boxes and is quickly adjustable for oversize packages.

Truck stands upright when not in use.

Slip tapered feet under carton, drop hook over the top, pull handle to balancing position and carton moves easily on roller bearing wheels.

Not expensive either.

Write for Bulletin #CC-33

The Sabin Machine Co.
6536 Carnegie Ave. Cleveland 3, Ohio

For more details circle NED-980 H4 on enclosed inquiry slip

2 STAGE CONTROL OPERATION WITH 1 MERCOID® PRESSURE CONTROL

AVAILABLE IN 17 PRESSURE RANGES FROM
0-30" VAC. TO 300-2500 PSI.
WITH THE SENSITIVITY YOUR APPLICATION REQUIRES

Mercoid DA-400 Series Pressure Controls are dual purpose controls, incorporating a single pressure element operating two separate, independently adjustable Mercoid magnetic switches. The switches may be used for multiple circuit control for various operations as the control responds to pressure changes.

AVAILABLE FOR FOLLOWING OPERATIONS:

SPECIFICATION No. 4122. One circuit opens on increase of pressure—second circuit opens on further increase of pressure.
SPECIFICATION No. 4129. One circuit closes on increase of pressure—second circuit closes on further increase of pressure.
SPECIFICATION No. 4132. Both circuits open at intermediate pressure. One circuit closes on increase of pressure above neutral zone—second circuit closes on decrease in pressure below neutral zone.
SPECIFICATION No. 4123. Both circuits close at intermediate pressure. One circuit opens on increase of pressure above neutral zone—second circuit opens on decrease in pressure below neutral zone.

WRITE FOR BULLETIN NO. 92.

THE MERCOID CORPORATION
4201 BELMONT AVE., CHICAGO 41, ILLINOIS, U.S.A.

For more details circle NED-981 H4 on enclosed inquiry slip

FREE FOLDER

TELLS HOW TO CUT LIMIT SWITCH COSTS

Find out about LOXSWITCH the heavy duty limit switch that exceeds 25,000,000 actuations

This folder contains results of tests by James H. Herron Company, testing laboratory, and Professor Brammer of Case Institute of Technology, on three major limit switches. You'll see how the faster break, greater contact pressure, and lower contact "bounce" of the revolutionary new Loxswitch reduce your switch costs to a minimum.

LOXSWITCH HEAVY DUTY LIMIT SWITCHES

Send for free folder today. Discover how to cut replacement costs, reduce downtime with heavy duty Loxswitch limit switches.

THE R. B. DENISON MFG. COMPANY
102 St. Clair Ave. N. E., Cleveland 13, O.
Please send me at once a copy of your Loxswitch folder.
Name .....
Address .....
City ..... Zone ... State ....
NED

For more details circle NED-982 H4 on enclosed inquiry slip

New Processes & Materials

RIGID PLASTIC PIPE resists shock and impact

Industrial and chemical plants are given a durable, chemically resistant and odorless plastic pipe with high resistance to shock and impact in rigid Koroseal pipe. It withstands rough handling and hard usage, will not rot or corrode and has good aging properties for indoor, outdoor and underground use. Lightweight pipe is made in lengths up to 20 ft and diameters from ½ to 2 in. Threaded fittings which may be disassembled and reused are available. Gray in color, pipe may be bent by heating to 250-300° F. Made by **B. F. Goodrich Co.**, Dept. E, 500 S. Main St., Akron 18, O.

For more details circle NED-983 H4 on enclosed inquiry slip

STRIPPABLE PLASTIC COATING protects parts from abrasion

Low-cost, strippable and transparent plastic coating protects surfaces and edges of metal tools, parts and finished products from abrasion and corrosion during storage, handling and shipping. Designated Thermo-Kote K, it is applied at 300° F by the dipping process. Material can be melted and reused after stripping. Made by **Bischoff Chemical Corp.**, Ivoryton, Conn.

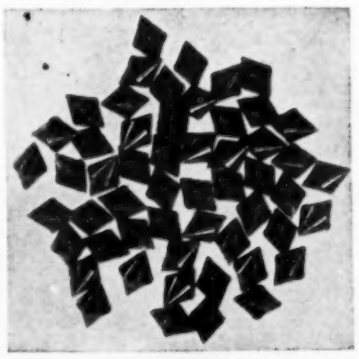
For more details circle NED-984 H4 on enclosed inquiry slip

THERMOSTAT METAL ELEMENTS are fabricated to specifications

General purpose ASC-1 bimetal from which company fabricates thermostat elements to specifications is available rolled to thicknesses as low as 0.001-in., ±0.0001-in. Bimetal is composed of equally thick layers of Invar (36 per cent nickel-iron alloy) as low-expansive lamina and a nickel-chromium-iron alloy for the high-expansive component. Metals are directly bonded by temperature and pressure. Flexivity value is 0.0000148, ±4 per cent in temperature range of 100 to 300° F. Electrical resistivity is 470 ohms per circular mil foot, or 370 ohms per square mil foot at 80° F. Available fabricated elements include cantilever strip, U-shape, spiral coil and helix coil types. Made by **American Silver Co.**, Thermostat Metal Div., Dept. NED, 36-07 Prince St., Flushing 54, N. Y.

For more details circle NED-985 H4 on enclosed inquiry slip

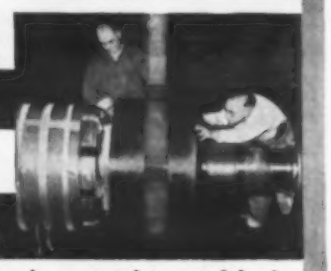
NYLON TUMBLING MEDIA for polishing fragile parts



Deburring and polishing of fragile parts, such as injection molded plastics; zinc, brass or aluminum pieces; or jewelry, is possible with Nylaslugs, molded nylon tumbling media. Process generally consists of using slugs with an abrasive of proper roughness. After thorough rinsing, slugs are used with polishing cream, after which they are tumbled with clean hardwood sawdust. Nylaslugs are available in shapes and sizes best suited for parts to be deburred. Made by **Rampe Mfg. Co.**, 3322 St. Clair Ave., Cleveland 14, O.

For more details circle NED-986 H4 on enclosed inquiry slip

GRIPPER WOVEN WIRE SLINGS
SAFER—MORE VERSATILE



SAFER—because each sling is *pre-tested* to rated load capacity before shipment, with a 5-1 safetv factor. Moreover, the spiral loop construction of Gripper slings guards against sudden breaks in use . . . specially heat treated handles provide extra strength at the hook.

MORE VERSATILE—use your Gripper sling for light or heavy, bulky or compact loads of any material or parts. Fully flexible sling body grips completely around even small radius loads in choke hitch. Broad, flat sling body provides wider bearing surface for greater load stability in either basket or choke hitch.

AVAILABLE—in standard lengths and widths with capacity up to 100,000 lbs. Special sizes and capacities on request. For details, see your mill supply, materials handling or safety equipment distributor. Or, write direct for free catalog and name of nearest distributor.

The Cambridge Wire Cloth Co.
Dept. R • Cambridge 8, Md.

WIRE CLOTH | METAL CONVEYOR BELTS | SPECIAL METAL FABRICATIONS

OFFICES IN LEADING INDUSTRIAL AREAS
DEALERS—write for open territory data.

For more details circle NED-987 H4 on enclosed inquiry slip

Write for 32 Page Catalog

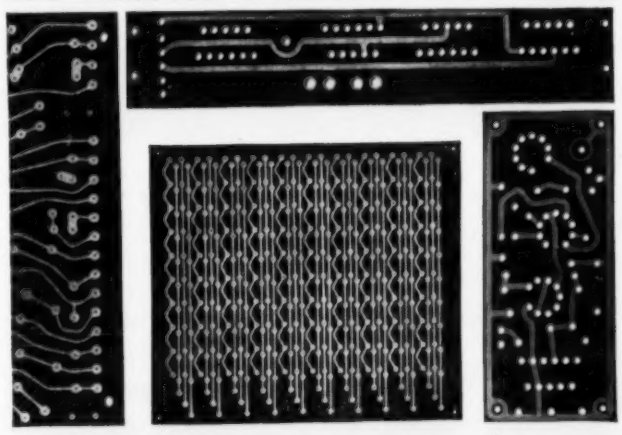
- Pump Controls
- Duplex Pump Alternators
- High and Low Level Cutoffs
- High and Low Level Alarms
- Multi-Level Signals
- Liquid Metering
- Special Controls and Panels

Listed by Underwriters Laboratories

CHARLES F. WARRICK CO.
1962 W. Eleven Mile Rd.
Berkley, Mich.

Warrick
FLOATLESS
LIQUID LEVEL CONTROLS
ELECTRODE TYPE

For more details circle NED-988 H4 on enclosed inquiry slip



Easy, accurate way to make
etched circuits, name plates

Now you can make time-saving, cost-saving etched printed circuits *photographically accurate*—with Kodak Photo Resist.

Kodak Photo Resist lets you pre-coat and store plates in ready-to-use form for months without losing sensitivity. Nor will they be affected by heat or humidity.

You can etch metal name plates, too, with Kodak Photo Resist. Because it gives traditionally sharp *photographic* definition, you'll find it the ideal material for this purpose.

WRITE FOR: technical data booklet on how to make etched circuits and name plates with Kodak Photo Resist.

EASTMAN KODAK COMPANY
Rochester 4, N. Y.

Kodak

For more details circle NED-989 H4 on enclosed inquiry slip

FOR BETTER MARKING

MATTHEWS INKS

If you're looking for the best ink to mark metals, fabrics, food products, glass, or any hard-to-mark surface . . . you'll find it among Matthews twenty-two easily applied Industrial Inks. Whether your marking is permanent or temporary, Matthews Inks assure you of clearer, more legible impressions.

Write today explaining your marking needs.

JAS. H. MATTHEWS & CO.
3943 FORBES ST. PITTSBURGH 13, PA.
BOSTON • CHICAGO • PHILADELPHIA • CLIFTON, N. J.

For more details circle NED-990 H4 on enclosed inquiry slip

"High Production" SANDER...

NATIONAL MODEL 600

CUTS FINISHING COSTS!

National Sanders are made for tough use on production lines. Properly used, they will cut sanding time up to 75% over hand sanding . . . reduce operator fatigue . . . and, at the same time, produce a better finish. These lightweight, vibrationless block sanders can be used on wood, metal, plastic, felt, stone, and other surfaces. Write for more information today.

NATIONAL AIR SANDER, INC., 2820 Auburn St., Rockford, Ill.

For more details circle NED-991 H4 on enclosed inquiry slip

Now A REAL . . . HUSKY . . . FULL SIZE SPECIFICATION SWITCH BUILT TO DO A FULL SIZE JOB CONTINUOUSLY

P&S 20AC1

IF you need switches that can be used at full rated capacity on fluorescent and incandescent loads

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IF you want to cut down replacement costs on heavy duty circuits

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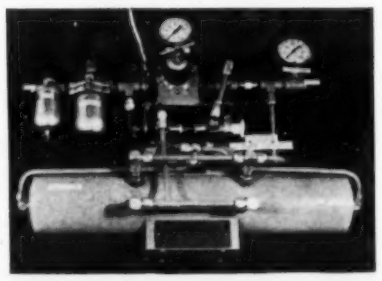

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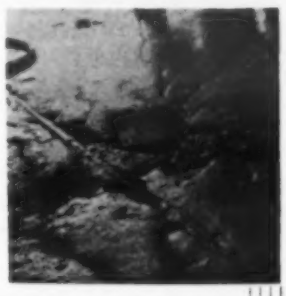

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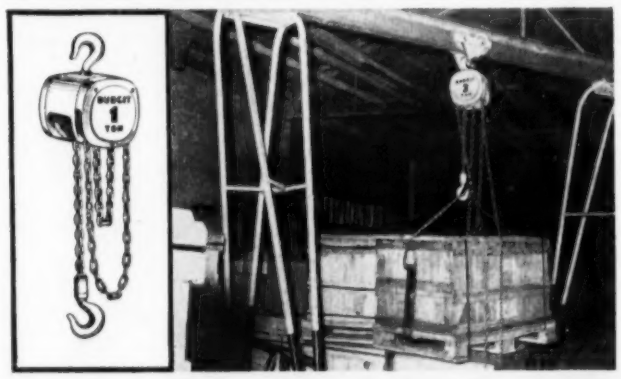

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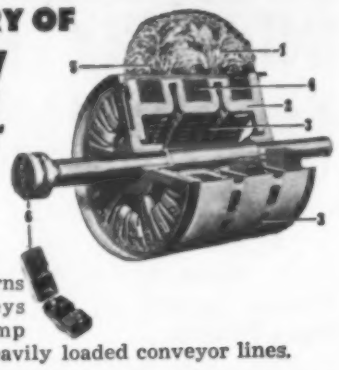

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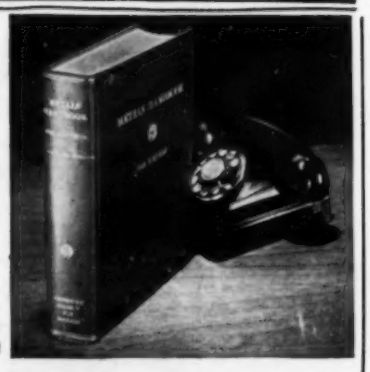

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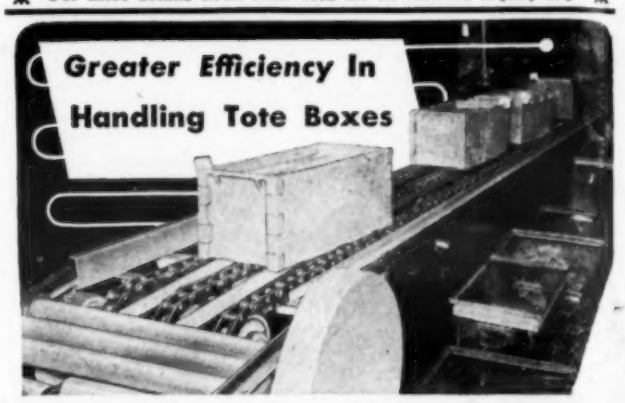

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